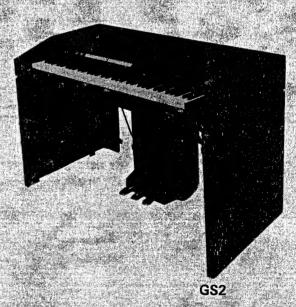
YAMAHA

COMBO KEYBOARD INSTRUMENTS





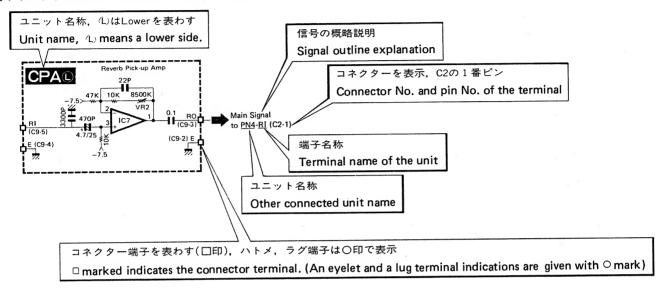
SERVICE MANUAL

CONTENTS(目次)

CODING (GUIDE (活用の手引)	1
SPECIFICA	ATIONS (総合仕様)	3
GS1 UNIT	LAYOUT	5
GS1 PANE	EL LAYOUT	6
GS2 PANE	EL LAYOUT, UNIT LAYOUT	9
	ram	
GS1 ASSE	MBLY PROCEDURE (組立手順)	15
GS1 DISAS	SSEMBLY PROCEDURE (分解手順)	18
GS2 ASSE	MBLY PROCEDURE (組立手順)	22
GS2 DISAS	SSEMBLY PROCEDURE (分解手順)	25
LSI PIN F	UNCTION	29
FM	Circuit Diagram	42
FM	Circuit Board & Wiring	45
KC	Circuit Board & Wiring	48
MPX (GS1)	Circuit Board & Wiring	51
RW	Circuit Board & Wiring	54
Α	Circuit Board & Wiring	57
MK1 (GS1), MK4 (GS2) Circuit Board & Wiring	60
MK2 (GS1), MK3 (GS2) Circuit Board & Wiring	63
PCA, PCB	(GS1) Circuit Board & Wiring	66
DC (GS1)	Circuit Board & Wiring	69
DC (GS2)	Circuit Board & Wiring	71
AC	Circuit Board & Wiring	73
PN (EQ, SI	EL-R, SER-L, TET) <gs1> Circuit Board & Wiring</gs1>	75
PN (CN, D	ET, EFF) <gs1> Circuit Board & Wiring</gs1>	77
PN (EQ, S	EL-R, SEL-L, EFF, STO) <gs2> Circuit Board & Wiring</gs2>	79
Other Circu	uit Boards Wiring	81
CARD RE	ADER UNIT Circuit Diagram	83
CARD RE	ADER UNIT Circuit Board & Wiring	85
PARTS LIS	ST	

CODING GUIDE(活用の手引)

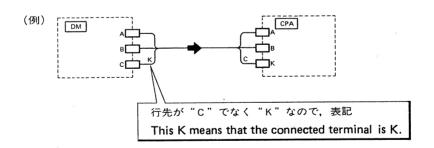
1. 回路図の見方 CIRCUIT DIAGRAM



上図はCPA①ユニット,コネクター#9の3番端子ROよりパネル4のコネクター#2の1番端子R1へ結線されている事を示しています。

尚,総合回路図において,信号およびデータラインの結線を,複雑さを避ける為にまとめて表示している場合がありますが,同一端子名どうしが結ばれる時は,行先端子名を表記せず,異なる端子と接続する相手端子を表記しています。

Above is a sample interconnecting code that is assigned to terminal RO of connector 9, pin 3 on CPA circuit board, the line from the RO connects to the terminal RI of connector 2, pin 1 on PN1 circuit board. In an overall circuit diagram, in order to avoid your confusion the signal lines and data lines have been mixed to be one line. In this case, when output terminal name and other connected terminal name is the same, its name is not written on the line, however, when the other terminal have a differ name, its name is shown on the line.



★信号表示

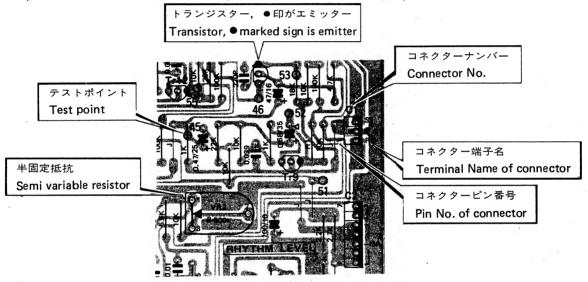
キーコードデータ(オシロスコープで測定可)	Key code data	(possible to	measure with a oscilloscop	e)
バルス形信号(オシロスコープで測定可)	Pulse form signal	(- do)
トリガーバルス(オシロスコープで測定可)	Trigger pulse	(- do)
楽音信号(シグナルトレーサーで可聴)	Audio signal	(possible to	measure with signal tracer)
低周波変調信号(テスターで測定可)	Low frequency mo	dulation signa	al (possible to measure wit	h VOM)
DCコントロール(テスターで測定可)	DC control signal	(- do)
	バルス形信号(オシロスコープで測定可) トリガーバルス(オシロスコープで測定可) 楽音信号(シグナルトレーサーで可聴) 低周波変調信号(テスターで測定可)	バルス形信号(オシロスコープで測定可) Pulse form signal Trigger pulse 来音信号(シグナルトレーサーで可聴) Audio signal Low frequency mo	バルス形信号(オシロスコープで測定可)Pulse form signal (Trigger pulse (Audio signal (possible to Low frequency modulation signal)	バルス形信号(オシロスコープで測定可) Pulse form signal (- do トリガーバルス(オシロスコープで測定可) Trigger pulse (- do 楽音信号(シグナルトレーサーで可聴) Audio signal (possible to measure with signal tracer 低周波変調信号(テスターで測定可) Low frequency modulation signal (possible to measure with

- ●全てのキャパシターは特に指定がない限りµF表示です。
- ●全ての抵抗は特に指定がない限り1/4Wです。
- ●全てのスイッチ、ボタン類はOFFポジションを示しています。
- ●図中のK印はセラミックキャパシター1000PFを示しています。
- All Capacitors are in μF unless otherwise specified.
- All Resistors are 1/4 watts unless otherwise specified.
- All Keyswitches, Tabswitches and push button switches show "OFF" position.
- "K" marked in Figs indicates 1000PF Ceramic Capacitors.

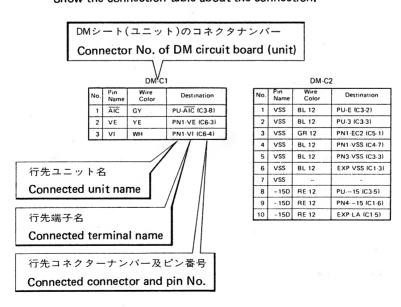
2, 基板図の見方 CIRCUIT BOARD

*断りのない場合は部品側からの表記です。

The pattern shows the view from the side parts mounted unless otherwise specified.



コネクターの接続はコネクター表にて表示しております。 Show the connection table about the connection.

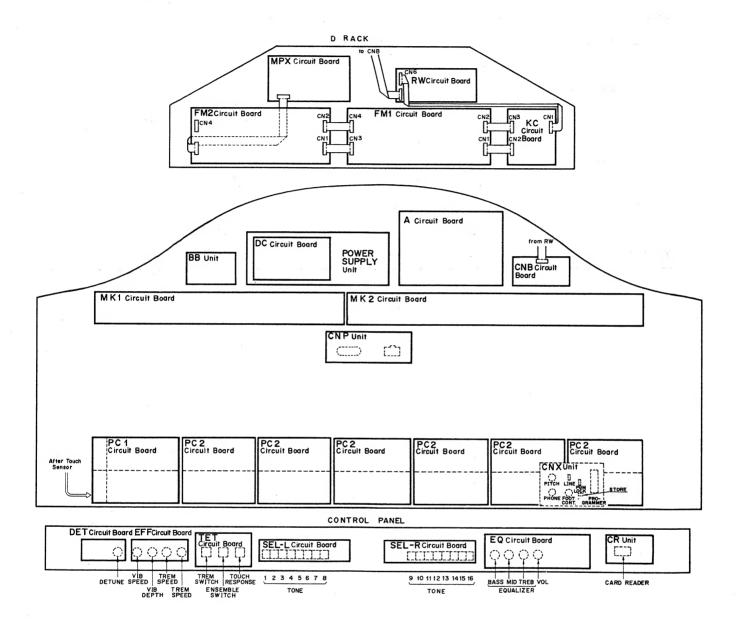


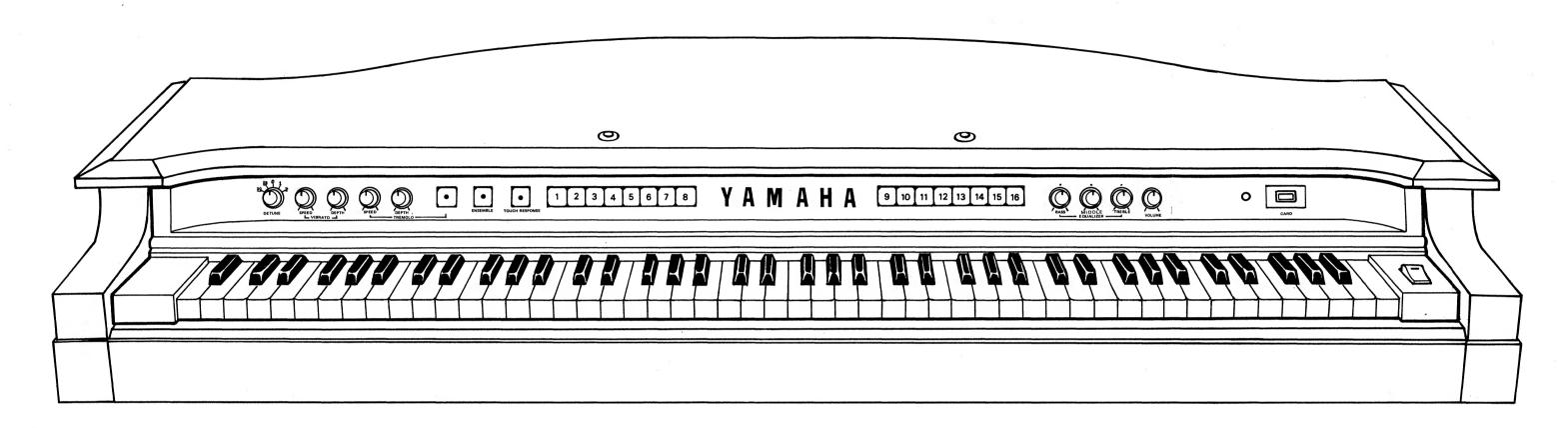
SPECIFICATIONS(総合仕様)

	GS1	GS2
KEYBOARDS	88 keys $A_{-1} \sim C_7$ (7 1/3 octaves)	73 keys $E_0 \sim E_6$ (6 octaves)
TONE GENERATOR	Frequency Modulation System 4 Carry 4 Modulation 8 EG	Frequency Modulation System 2 Carry 2 Modulation 4 EG
Maximum number of notes	16 notes	16 notes
CONTROL PANEL		
DITUNING	RANDOM 2 RANDOM 1 OFF 0 STATIC 1 STATIC 2	OFF 0 STATIC 1 STATIC 2
TREMOLO	TREMOLO SPEED (1 \sim 6Hz) TREMOLO DEPTH	TREMOLO SPEED (0.8 ~ 10Hz) TREMOLO DEPTH
VIBRATO	VIBRATO SPEED (4 ~ 10Hz) VIBRATO DEPTH	VIBRATO SPEED (4 \sim 10Hz) VIBRATO DEPTH
TREMOLO Switch	ON – OFF	ON – OFF
ENSEMBLE Switch	ON – OFF	ON - OFF
TOUCH RESPONSE Switch	ON – OFF	
TONE SELECTORS	1, 2, 3, 4, ~ 16	1, 2, 3, 4, ~ 16
IQUALIZER	BASS ± 12 dB at 100Hz MID-RANGE ± 12 dB at 600Hz TREBLE ± 10 dB at 6KHz	BASS ± 12 dB at 100 Hz MID-RANGE ± 12 dB at 600 Hz TREBLE ± 10 dB at 6 KHz
MASTER VOLUME	(Control Panel)	(Control Panel)
CARD READER	2 Pass/Tone	1 Pass/Tone
STORE Switch	(Bottom Panel)	(Control Panel)
OTHER PANELS		
MASTER PITCH	+35 Cent \sim -25 Cent (Bottom Panel)	+35 Cent \sim –25 Cent $\stackrel{\text{(Control}}{\text{Panel)}}$
HEADPHONES Jack	8Ω Mixed OUT (Bottom Panel)	8Ω Mixed OUT (Front Rail)
FOOT CONTROL Jack	For EXP. Pedal (Bottom Panel)	For EXP. Pedal (Rear Panel)
PGM. LOCK Switch	IN — OUT (Bottom Panel)	LOCK — UNLOCK (Rear Panel)
LINE Switch	ON — OFF (Bottom Panel)	ON — OFF (Front Rail)
PROGRAMMER Connector	24P (Bottom Panel)	24P (Rear Panel)
BATTERY (Memory back-up)	UM3 x 2 (Bottom Panel)	UM3 x 2 (Bottom Panel)
PEDAL CONTROLS		
DAMPER Pedal	ON — OFF	ON — OFF
TREMOLO Pedal	ON – OFF	ON — OFF
VIBRATO Pedal	ON – OFF	ON – OFF

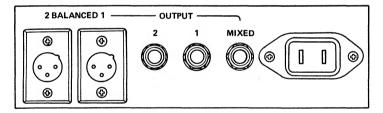
· · ·	GS1	GS2	
OUTPUT			
OUTPUT Jack (0dB)	CH1, CH2, MIXED (Pedal Unit)	CH1, CH2, MIXED (Rear Panel)	
Balanced OUTPUT (-20dB)	CH1, CH2 (Pedal Unit)	CH1, CH2 (Rear Panel)	
POWER CONSUMPTION			
INPUT	AC100V, 120V, 220V, 240V 95W	AC100V, 120V, 220V, 240V 40W	
DIMENSIONS		e parties en	
Width	1,500 mm (59")	1,283 mm (50-1/2'')	
Depth	832 mm (32-3/4'')	641 mm (25-1/4'')	
Height	826 mm (32-1/2")	823.5 mm (32-1/2")	
Weight	90 kg (198.4 lbs)	72 kg (158.7 lbs)	

GS1 UNIT LAYOUT

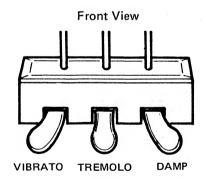




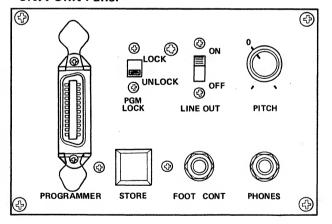
PEDAL Unit Back Panel



PEDAL Unit



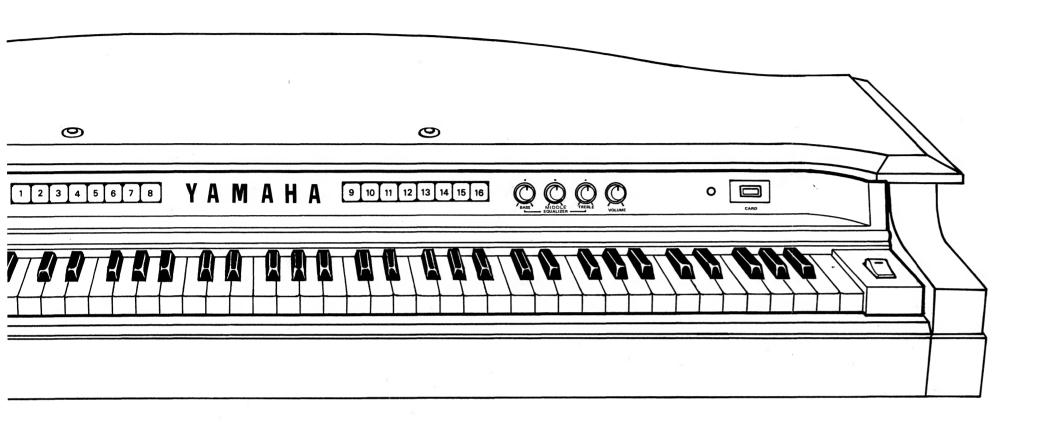
CNX Unit Panel

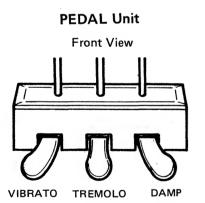


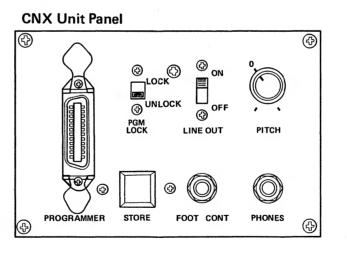
6

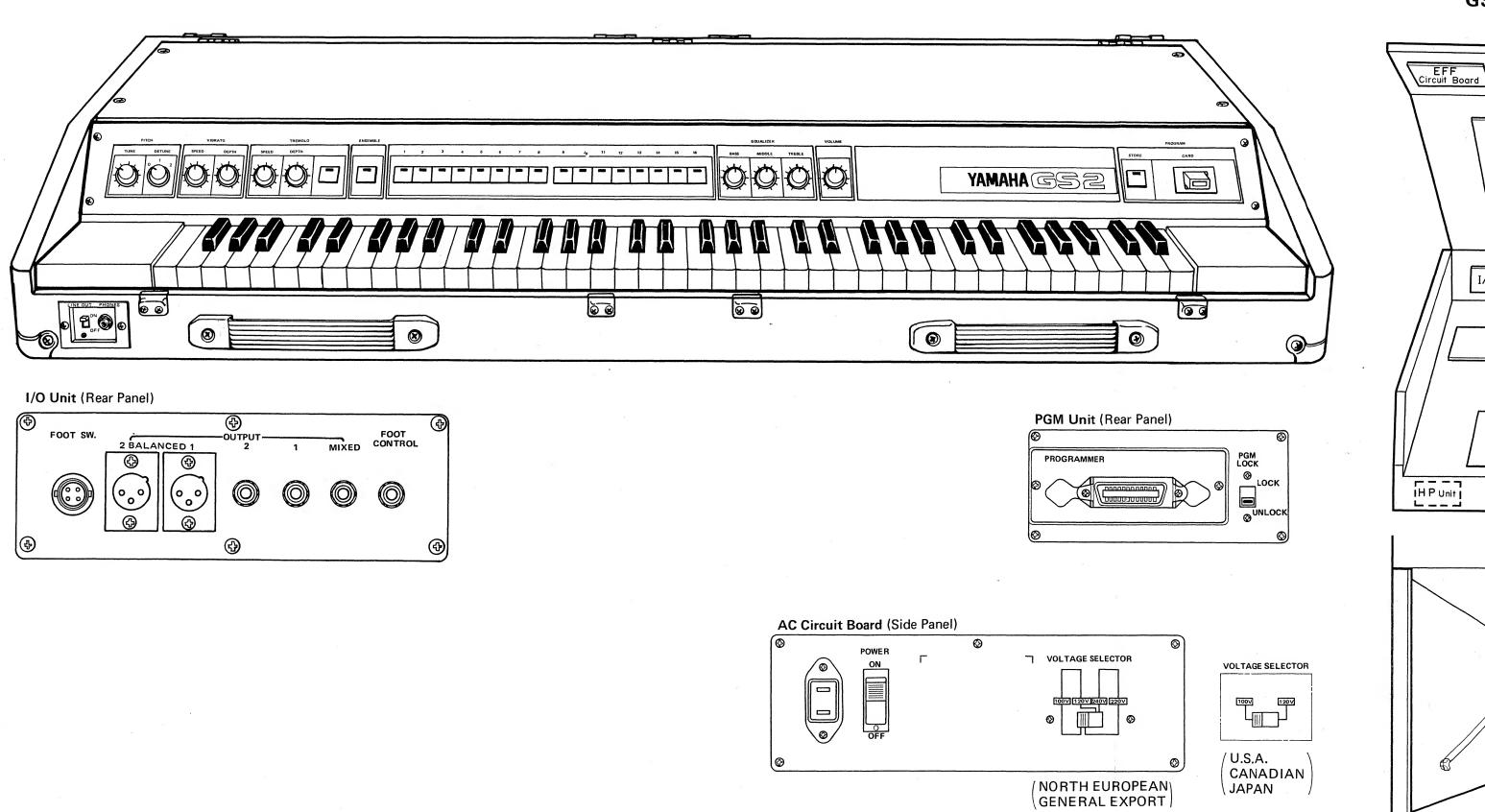
7

GS1 PANEL LAYOUT

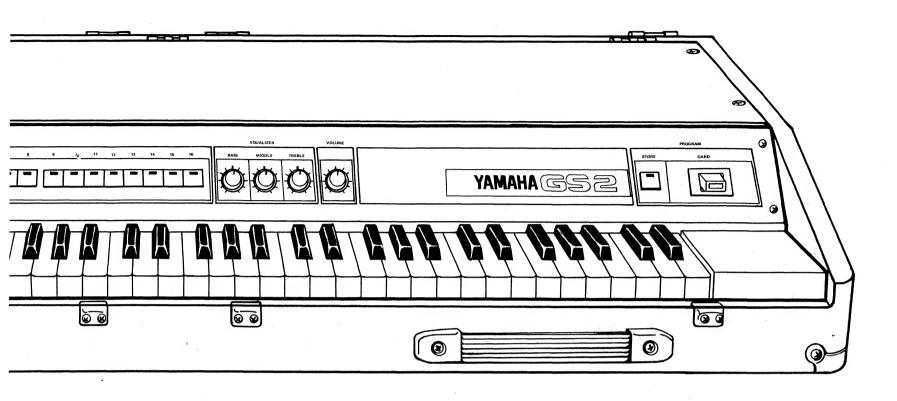


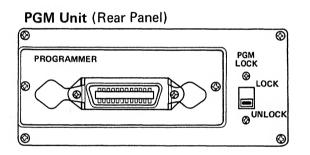


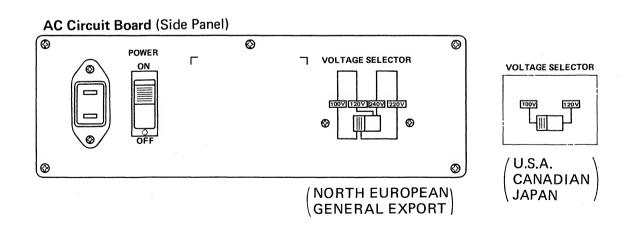


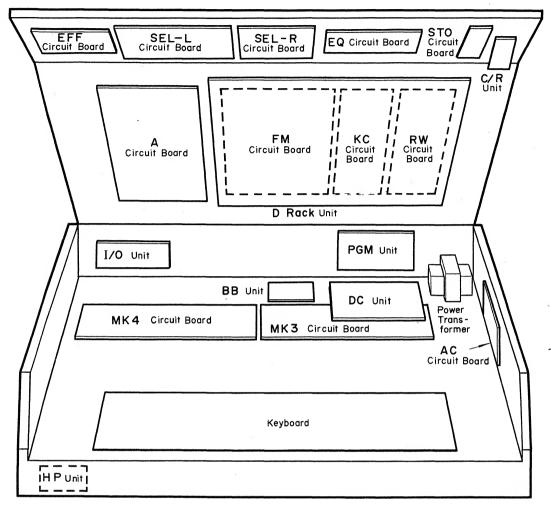


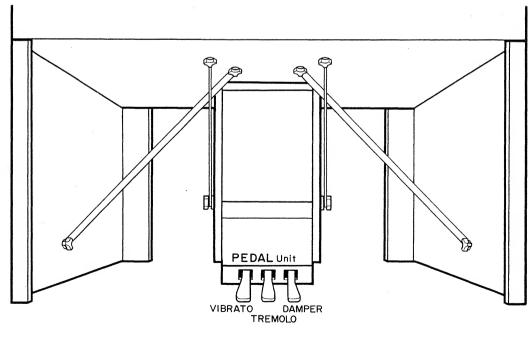
GS2 PANEL LAYOUT · UNIT LAYOUT

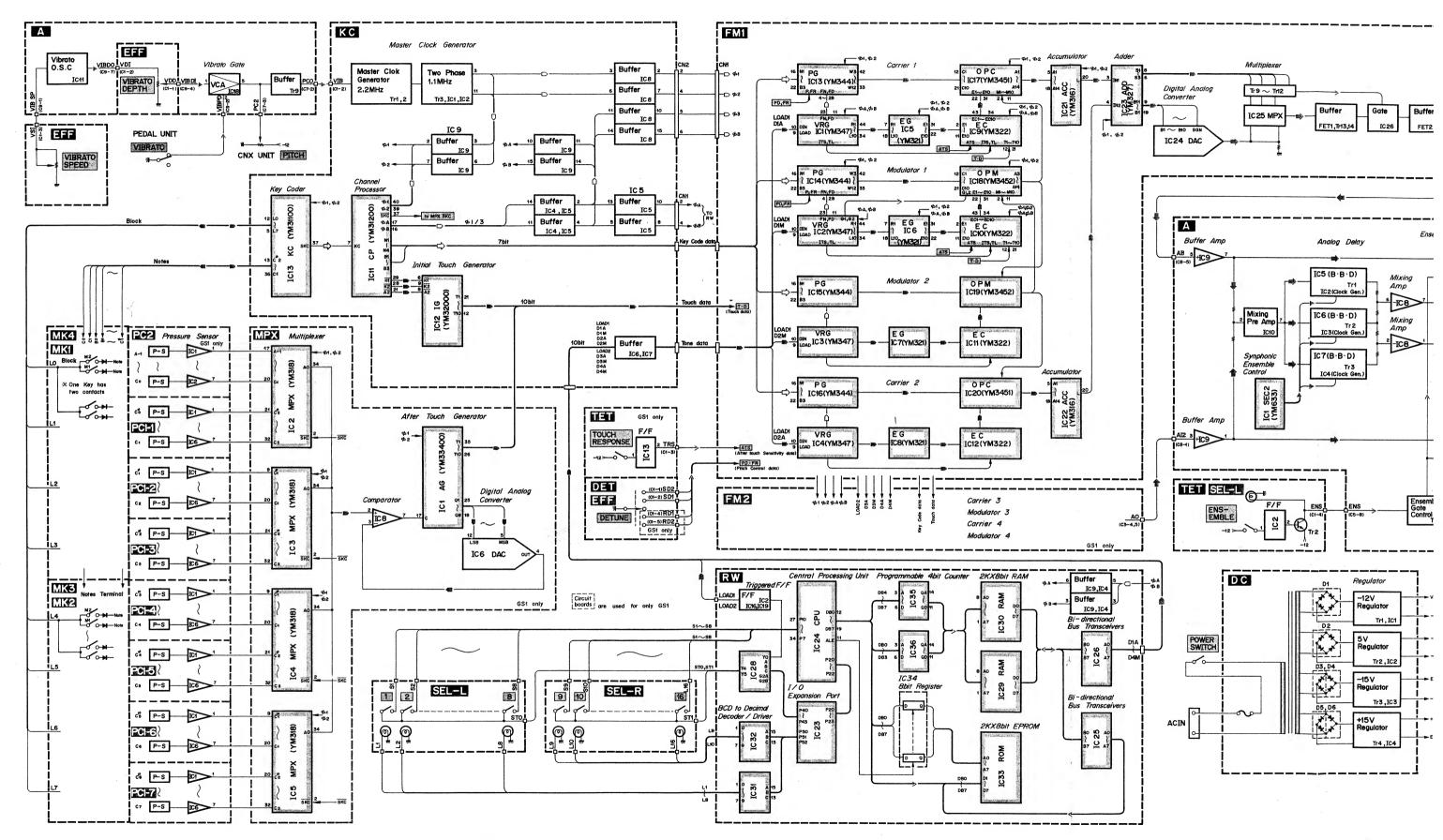




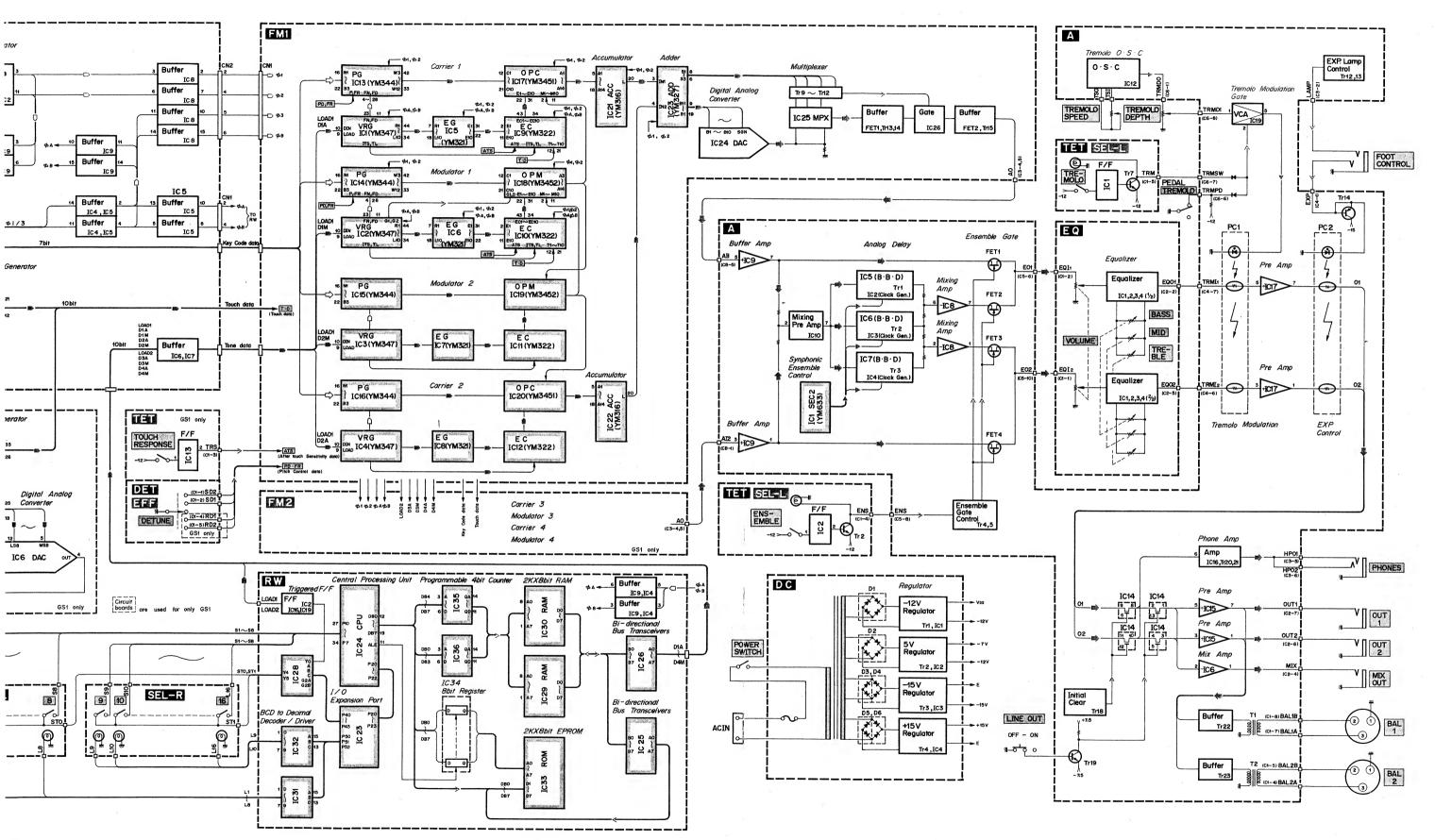




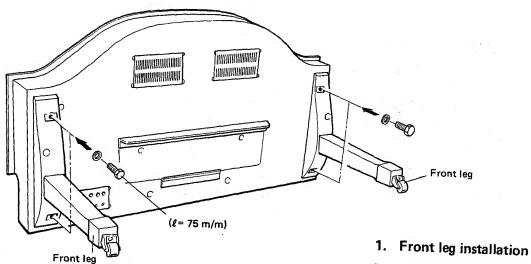




GS1/GS2 Block Diagram



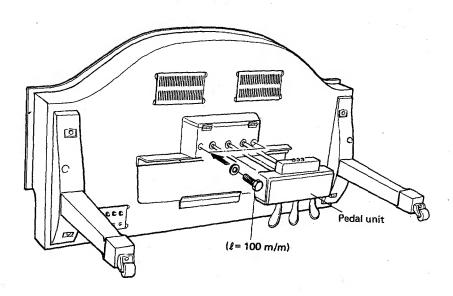
GS1 ASSEMBLY PROCEDURE(組立手順)



Lay the body on its back as illustrated and fix the front legs with bolts and washers.

1. 前脚の取り付け

本体を図のように横にして、前脚をボルトとワッシャで 固定します。

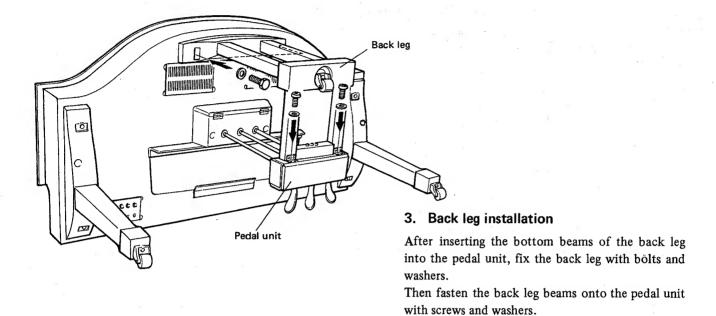


2. Pedai unit installation

Next, fix the pedal unit with bolts and washers.

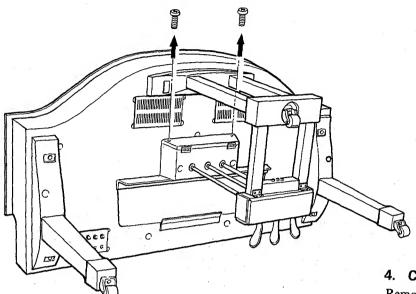
2. ペダルユニットの取り付け

次に、ペダルユニットをボルトとワッシャで固定して下 3110



3.後脚の取り付け

後脚の横柱をペダルユニットに差し込んだ後,後脚をボルトとワッシャで固定します。その後,後脚の横柱とペダルユニットをネジとワッシャで連結して下さい。



4. Connectors installations

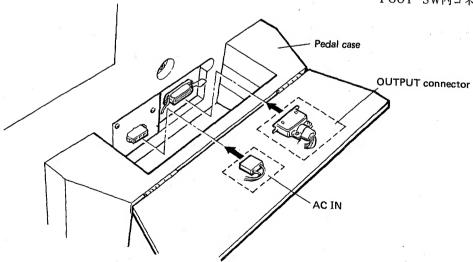
Remove the screws of the pedal unit. Connect the two connectors inside the unit. Then replace the screws tightly.

Connect the pedal cable to the FOOT SW connector as illustrated.

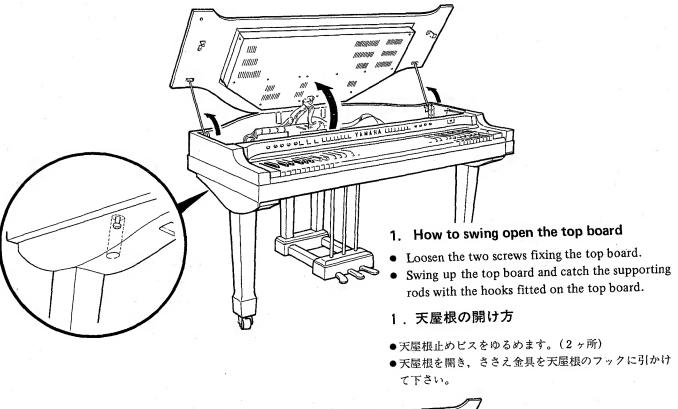
4. コネクタの取り付け

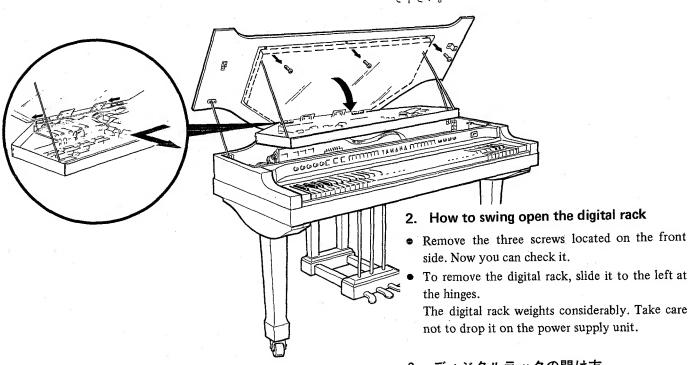
ペダルユニットのネジを外し内部のコネクタ 2 個を連結し、再びネジを固定します。

ペダル箱よりペダルケーブルを取り出し、図の様に FOOT SW内コネクタへ取り付けます。



GS1 DISASSEMBLY PROCEDURE(分解手順)

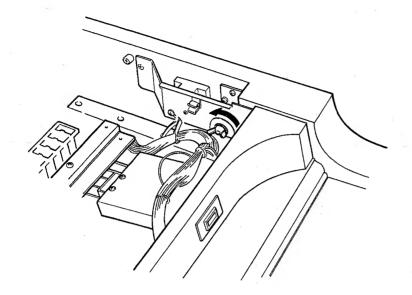




2. ディジタルラックの開け方

- ●手前側3本のネジを外せば、ディジタルラックは、前 方に開き、チェック出来る状態になります。
- ●ディジタルラックは、蝶番の所を左にずらせば外すことが出来ます。

この場合、ディジタルラックはかなり重いので、電源 ユニットの上へ落とさない様注意して下さい。

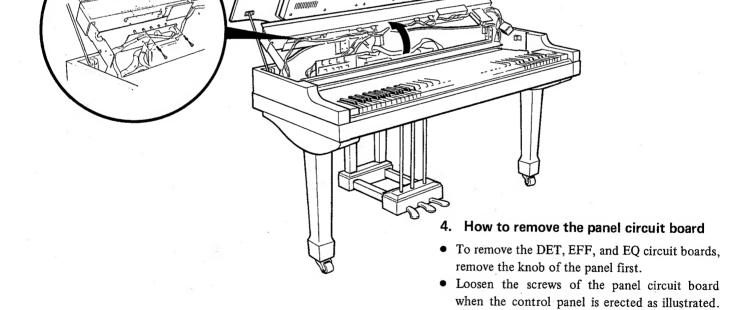


3. How to erect the control panel

Loosen the wing bolts located on the left and right sides as illustrated and erect the control panel.

3. コントロールパネルの起こし方

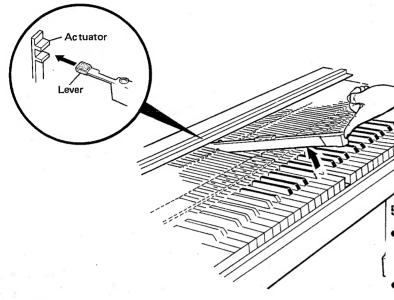
図の様に左右2ヶ所にある蝶ボルトをゆるめて、コントロールパネルを起こします。



4. パネルシートの外し方

Then remove the circuit board.

- ●DET, EFF, EQシートを外す場合は, あらかじめパ ネルのつまみを外しておきます。
- ●図の様にコントロールパネルを起こした状態で、パネルシートのビスをゆるめて、シートを外します。



6. How to remove the PC circuit board

- The PC circuit board is located under the keyboard. Remove the keys located over the PC circuit board to be removed.
- Remove the dust cover.
- Remove the eight screws fixing the PC circuit board.
- Remove the circuit board from two holders by squeezing them with pliers.

6. PCシートの外し方

- ●PCシートは、鍵盤の下にあります。外そうとするPC シート上の鍵盤を取り外して下さい。
- ●防塵カバーを外して下さい。
- ●PCシートを止めているビスを外します。(8本)
- ホルダーで固定してある箇所(2ヶ所)は、ラジオペン チではさんでから外すようにします。

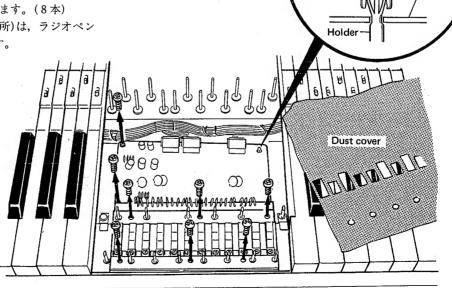
5. How to remove a key

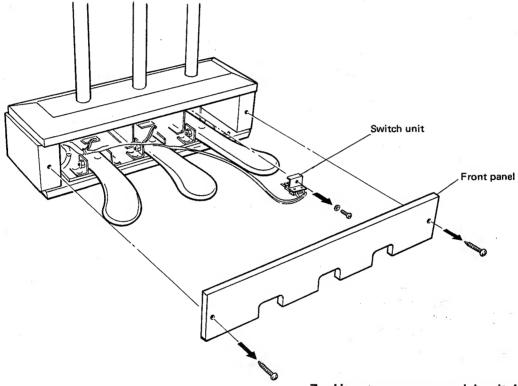
- To remove a key, lift it on the end nearer to you while the control panel is erected and pull it toward you.
- To replace the key, fit the lever to the depression of the actuator.

5. 鍵盤の外し方

- ●コントロールパネルを起こした状態で図の様に鍵盤の 手前側を持ち上げて,手前に引き出せば鍵盤を外すこ とが出来ます。
- 鍵盤をもとにもどす時には、レバーがアクチェーター の凹部に入るように位置を合わせて下さい。

Circuit board





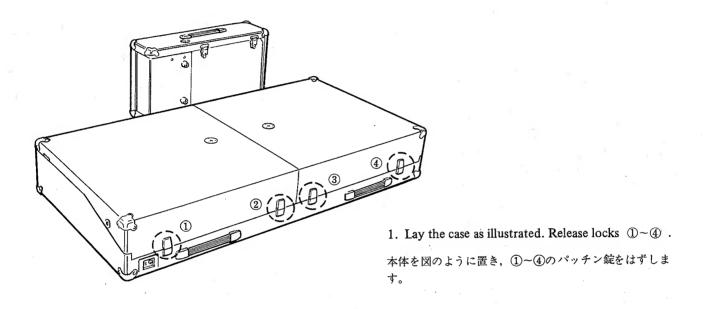
7. How to remove a pedal switch

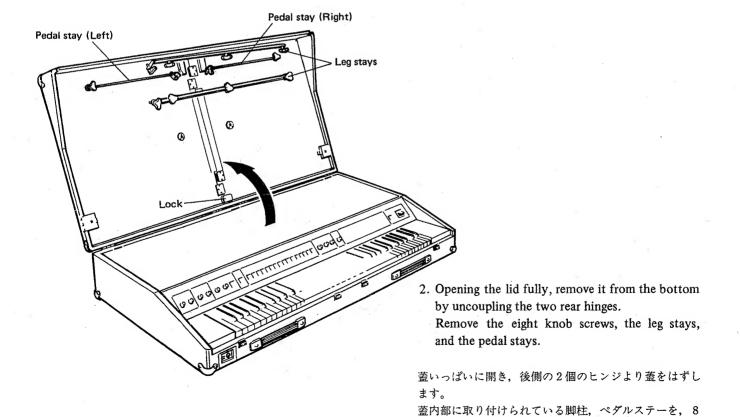
- Remove the front panel of the pedal unit.
- Loosen the screw accessible from the front side and the switch unit can be removed.

7. ペダルスイッチの外し方

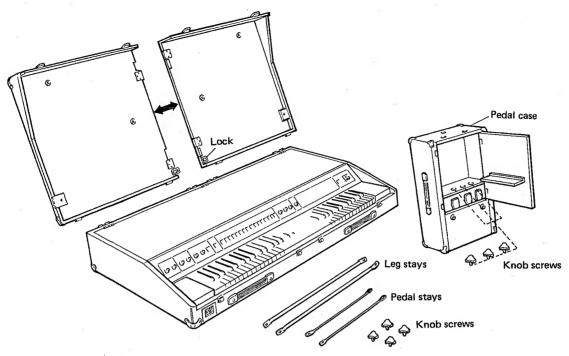
- ●ペダルユニットの前面パネルを外します。
- ●スイッチユニットは前面からビスをゆるめれば外すこ とが出来ます。

GS2 ASSEMBLY PROCEDURE(組立手順)



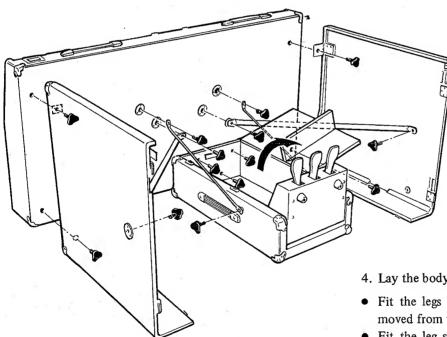


個のノブネジをはずし取り出します。



蓋内部のパッチン錠をはずして蓋を2つに分け、本体の 脚にします。

3. Release the lock of the lid and divide it into two parts to use it as legs.

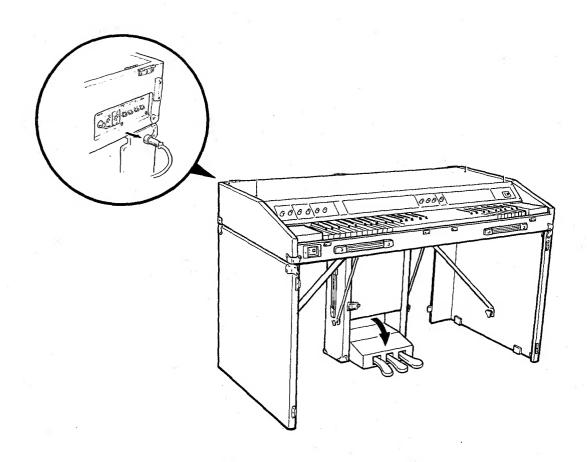


本体を図の様に、横にします。

- ●蓋脚を取りつけます。(蓋内部からとりはずした4本の ノブネジを使います)
- ●脚柱を取りつけます。(脚柱に付いている4本のノブネ ジを使います)
- ペダル箱を取りつけます。(ペダル箱内の3本のノブネジを使います)
- ペダルステーの右、左を確認して取りつけます。(ペダルステーに付いている4本のノブネジを使います)

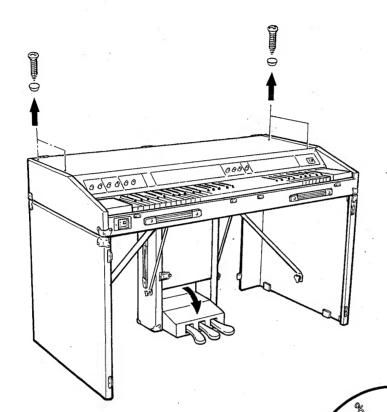
- 4. Lay the body on its back as illustrated.
- Fit the legs (lid) (use the four knob screws removed from the lid).
- Fit the leg stays (use the four knob screws provided for the leg stays).
- Fit the pedal case (use the three knob screws provided in the pedal case).
- Fit the pedal stays (use the four knob screws provided for the pedal stays). Note that the left and right pedal stays differ. Install each at the right place.

Connect the pedal cable, put in the pedal case, to the foot switch connector on the rear panel.



- Connect the pedal cable to the FOOT SW connector as illustrated.
- ●ペダル箱よりペダルケーブルを取り出しリヤパネルの FOOT SW 用コネクタへ取り付けます。

GS2 DISASSEMBLY PROCEDURE(分解手順)

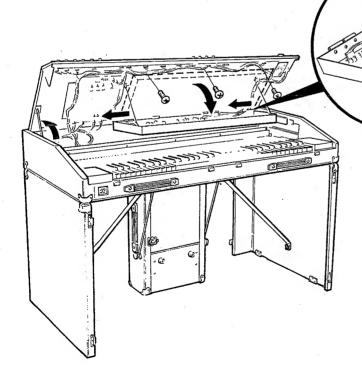


1. Opening top board

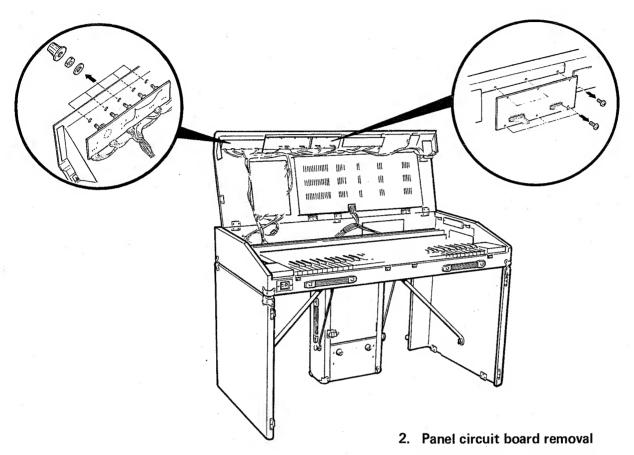
Remove the four screws fastening the top board.

1. 天屋根のあけ方

天屋根止めネジ4本を取りはずします。



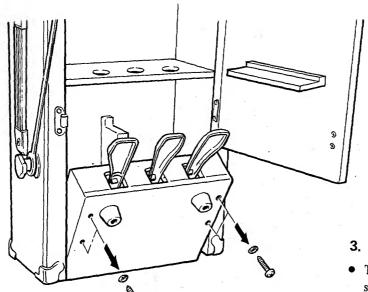
- Open the top board and catch the left and right stays with the stay hooks securely.
- To check the digital rack, remove the three screws illustrated.
- To remove the digital rack, remove the rack ropes and move it to the left so that it slips off at the hinges. You may work more easily in this condition.
- 天屋根を開き左右の屋根ステー受け金具に確実にかけます。
- ●ディジタルラックは、図の3本の止めネジをはずす事で、チェックが可能な状態となります。
- ●ディジタルラックは、ラックロープをはずし、ディジ タルラック全体を左側に押す事で蝶番部よりはずれ、 より作業を楽にする事が出来ます。



- To remove the panel circuit boards, remove the control knobs on the panel surface and hex nuts.
 (EFF and EQ circuit boards)
- Remove screws from the circuit board side. (SELL, SELR and STO circuit boards)

2. パネルシートの外し方

- ●パネル面よりパネルボリュームのツマミと6角ナット をはずすと、シートをはずす事が出来ます。(EFF, EQ シート)
- ●シート側より止めネジを外す事でシートをはずす事が 出来ます。(SELL, SELR, STOシート)

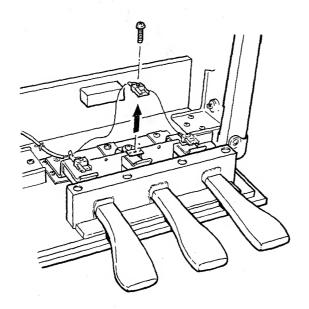


3. Pedal switch removal

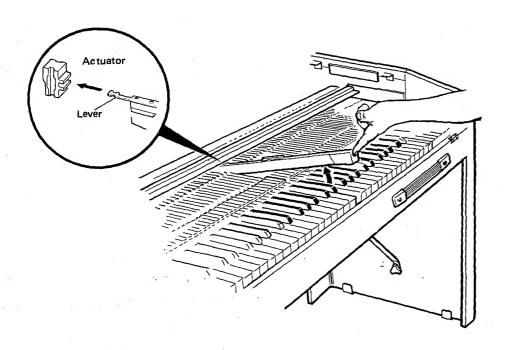
• To remove the pedal cover, remove the four screws on the bottom.

3. ペダルスイッチの外し方

●ペダル下部の止めネジ4本をはずす事でペダルカバーを外す事が出来ます。



- To remove the switch, remove the set screw fixing the switch.
- ●止めネジを外す事でスイッチを取り出す事が出来ます。



4. Key removal

- To remove a key, lift its end as illustrated and pull it toward you.
- When replacing the key, fit the lever to the depression of the actuator.

4. 鍵盤の外し方

- ●図の様に鍵盤の手前側を持ち上げて手前に引き出せば 鍵盤を外すことが出来ます。
- 鍵盤をもとにもどす時には、レバーがアクチェータの 凹部に入るように位置を合わせて下さい。

LSI PIN FUNCTION

Don't Name	Name	F. marking	Q	'ty
Part Name	Name	Function	GS1	GS2
YM31100	KC	Key Coder	1	1
YM31200	СР	Channel Prossesor	1	1
YM34400	PG	Phase Generator	8	4
YM34501	OPC	Operator-Carrier	4	2
YM34502	ОРМ	Operator-Modulator	4	2
YM34700	VRG	Voice Register	8	4
YM32100	EG	Envelope Generator	8	4
YM32200	EC	Envelope Controller	8	4
YM31800	MPX	Multiplexer	4	0
YM32000	IG	Initial touch Generator	1	1
YM33400	AG	After touch Generator	1	0
YM31600	ACC	Accumulator	4	2
YM32700	ADD	Adder	2	1

Part Name YM31100	Function	KC (Key Coder)
-------------------	----------	----------------

Ter	minal	Dogari	ntion		Ter	minal	Descri	ntion		
Pin No.	Name	Description		Pin No.	Name	Descri	puon			
1	VSS	Ground(OV)	Ground(OV)		40	φ2	Master clock(1MHz	z) IN	
2	16Y16	16 time slot synchr	o data:	IN (←CP)	39	φ1	-do (opposite	phase o	of φ2)	
3	T Ţ.	Test Pin		IN	38	VDD	-12V DC sup	ply	IN	
4	LP	Damp data	ampe	r Pedal)	37	SKC	Serial Key Code data	a	OUT (⇒CP)	
5	L7	$(C_6^{\#} \sim C_7)$)		36	C1	1st contact	<u> </u>	,	
6	L6	$(C_5^{\sharp} \sim C_6)$		-	35	C2	2nd contact			
7	L5	$(C_4^{\sharp} \sim C_5)$	Octa		34	B1	1st contact	В		
8	L4	$(C_3^{\sharp} \sim C_4)$		ock	33	B2	2nd contact	Î		
9	L3	$(C_2^{\sharp} \sim C_3)$		erminals	32	A # 1	1st contact	A #	×	
10	L2	(C # ~ C 2)	16	erminais	31	A # 2	2nd contact	A		
11	L1	$(C_0^{\sharp} \sim C_1)$	-		30	Ā1	1st contact		Note	
12	LO	$(C_1^{\sharp} \sim C_0)$]		29	Ā2	2nd contact) A	Block	
13	C#2	2nd contact	C#)		28	G#1	1st contact	G#	Terminals	
14	C # 1	1st contact	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	a de la companya de	27	G#2	2nd contact		reminds	
15	D2	2nd contact) D	Note	26	G1	1st contact	G		
16	D1	1st contact	S D	Block	25	G2	2nd contact	G		
17	D#2	2nd contact	D#	Terminals	24	F # 1	1st contact	F#		
18	D#1	1st contact	} "	7 0 1 1 1 1 1 1 1 1	23	F # 2	2nd contact] F "		
19	E2	2nd contact	} E		22	F1	1st contact	F		
20	E1	1st contact] - '		21	F2	2nd contact	} 「		

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1	vss	Contract of the last		40
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	_	16Y	16	ø1	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		Т		VDD	_
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	-			SKC	-
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	_5	<u>L7</u>		C1	<u> </u>
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				C2	35
$ \begin{array}{c cccc} & & & & & & & \\ \hline & & & & & & \\ \hline & & & & & \\ \hline & & & & & \\ \hline & &$				B 1	<u> </u>
$ \begin{array}{c cccc} & & & & & & & \\ \hline & & & & & & \\ \hline & & & & & \\ \hline & & & & & \\ \hline & &$			00		-
$ \begin{array}{c cccc} & & & & & & & \\ \hline & & & & & & \\ \hline & & & & & \\ \hline & & & & & \\ \hline & &$		L3	311	A # 1	
$ \begin{array}{c cccc} & & & & & & & \\ \hline & & & & & & \\ \hline & & & & & \\ \hline & & & & & \\ \hline & &$	10		Ë	A # 2	
$ \begin{array}{c cccc} & & & & & & & \\ \hline & & & & & & \\ \hline & & & & & \\ \hline & & & & & \\ \hline & &$		E1	0	Ā1	30
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		LO	Ž	$\overline{A2}$	
$ \begin{array}{ccc} 15 & \overline{D2} & \overline{G1} \\ -\overline{D1} & \overline{G2} \end{array} $				G#1	
$ \begin{array}{cccc} & D2 & G1 \\ \hline D1 & G2 & 25 \end{array} $				$\overline{G^{\sharp}2}$	-
-D1 G2	15	D2			
— D [#] 2 F [#] 1 —		D1		G2	25
		D#2		F # 1	
— D#1 F#2		D#1		F # 2	
— <u>F2</u> F1	-	E2		F1	_
20 E1 F2 21	20	E1		F2	21

Part Name	YM31200	Function	CP (Channel Prossesor)
-----------	---------	----------	------------------------

Ter	minal	Description	Terminal		Descript	tion
Pin.No.	Name	Description	Pin.No.	Name	Description	
1	vss	Ground(0V)	40	φ2	Master clock(1)	ИHz) IN
-2	ĪC	Initial clear IN	39	φ 1	do. (opposite p	phase of ϕ 2)
3	NC		38	VDD	-12V DC supp	iy IN
4	NC		37	SKC	Serial Key Code data(9µs×	(16) OUT
5	NC		36	N1	Note data	
6	NC		35	N2	Note data	
7	KC	Serial Key Code data (+KC)	34	<u>N3</u>	Note data	Parallel
8	E7)	33	N4	Note data	Key
9	E8		32	B1	Block data	Code data
10	E9	Envelope Counter IN	31	B2	Block data	(1 _µ s×16)
11	E10	(←EC)	30	B3	Block data	OUT (⇒PG)
12	EE	Empty channel Detection	29	<u>K1</u>	Keyboard data	
13	Ϋ́Υ	Test Pin	28	K2	Keyboard data	
14	16Y16	16 time slot synchro data OUT	27	Ā1	Test Pin	
15	9Y9	9 time slot synchro data OUT	26	NN3	Note data	Key Code
16	φB	Master clock(ϕ 1 3) OUT	25	NN4	Note data	data for
17	φA	do. (opposite phase to ϕB)	24	BB1	Block data	Scaling
18	SCH	Not Used	23	BB2	Block data	(3μs×16)
19	DP	Damp data OUT	22	BB3	Block data	(⇒VRG)
20	D1	Decay Data OUT (Key OFF→Decay finish)	21	Ā2	Channel occupation	data OUT

	•			
1	VSS		φ2	40
	īC '		φ1	
-	NC		VDD	-
<u></u>	NC		SKC	-
_5	NC		$\overline{N1}$	
	NC		N2	<u>35</u>
	КC	0	N3	
	E7	20	$\overline{N4}$	
-	E8	131	B1	
10	E9	٤	B2	
	E10	CP (YM31200)	B3	30
	ĒĒ		<u>K1</u>	
	\overline{YY}		K2	_
	16Y1	6	A1	<u> </u>
15	9Y9		NN3	
	φB		NN4	25
	φA		BB1	<u> </u>
	SCH		BB2	
	DP		BB3	<u> </u>
<u>20</u>	D1		A2	21
1			····	

Part Name	YM34400	Function	PG (Phase Generator)

-	minal		To:	minal		1		
Pin No.	Name	Description	Pin No.	Name	Description	4 -		140
1	VSS	Ground(0V)	48	φ2	Master clock(1MHz) IN	-	VSS	φ2 48
2	<u>9</u> 79	9 time slot synchro data (+CP)	47	φ 1	do. (opposite phase of ϕ 2)	l I.	9 <u>79</u>	φ1 —
3	ĀZ	Channel occupation data (+CP)	46	VDD	-12V DC Supply IN	[A2	VDD 45
4	FNO)	45	TŌ	Test Pin	51.	FN0	10
5	FN1		44	W1			FN1	<u>W1</u>
6	FN2	Frequency Control data	43	W2		l I.	FN2	W2
7	FN3	IN (← VRG)	42	W3	*	! I_	FN3	<u>W3</u>
8	FN4	i	41	W4		1 1	FN4	$\frac{\overline{W4}}{\sqrt{5}}$ 40
9	P1		40	W5		1 4 4 4	P1 6	W5 40
10	P2		39	W6	Phase data OUT		P1	W6 -
11	P3		38	W7	ωct (⇒OPC)		P3 5	<u> </u>
12	P4	Pitch Control data IN	37	W8	ωmt (⇒OPM)	i i		1
13	P5		36	W9	(401111)	1	P5 C	Lloc
14	P6		35	W10		1 = 1	P6	VV 10
15	P7	}	34	W11	* *		P7	W11
16	N1	Note data	33	W12	,	1	N1	W12
17	N2	Note data	32	YO	Synchro data(16 time slot) OUT	1 1	N2	<u>Y0</u> —
18	N3	Note data	31	Ÿi	Synchro data(16 time slot)	1.	N3	Yi 30
19	N4	Note data Key Code data	30	FR2	Random tune data IN	201.	N4	FR2
20	B1	Block data (+CP)	29	FR1	Random tune data IN		B1	FR1
21	B2	Block data	28	FD6		1 1	B2	FD6
22	B3	Block data	27	FD5	IN Detune data	1	B3	FD5
23	FD1) Dotuno doto	26	FD4	→ Deturie data (←VRG)	24	FD1	FD4 25
24	FD2	} Detune data (←VRG)	25	FD3			FD2	FD3 25

Part Name	YM34501	Function	OPC (Operator-Carrier)

Te	rminal	D	Ter	rminal		
Pin.No.	Name	Description	Pin.No.	Name	Description	1
1	VSS	Ground(OV)	48	φ2	Master clock(1MHz) IN	$\frac{1}{\sqrt{2}}$ VSS ϕ^2 ϕ^4
2	M1		47	φ1	do (opposite phase of ϕ 2)	$-\sqrt{M1}$ ϕ^1
3	M2		46	VDD	-12V DC Supply IN	$-\overline{M2} \qquad VDD - 45$
4	M3	* ,	45	Ā1		
5	M4		44	Ā2		$\frac{3}{M4}$ $\overline{A2}$
6	M5	Modulation data IN	43	Ā3	*, v	— M5 A3 —
7	M6	(← OPM)	42	Ā4	111 re	$-\overline{M6}$ $\overline{A4}$
8	M7	I(t)sin ωmt	41	Ā5	. 0	$-\overline{M7}$ $\overline{A5}$
9	M8		40	Ā6	*	$\frac{10}{10}$ $\frac{\overline{M8}}{5}$ $\frac{\overline{A6}}{\overline{A6}}$
10	M9	*	39	Ā7	Sound source waveform data	M8 LOG A6 A7 A8 A8 A9 A9 A9
11	M10)	38	Ā8	оит	$ \overline{M10}$ \times $\overline{A8}$ $-$
12	C1		37	Ā9	(⇒ACC)	
13	C2		36	A10	A(t)sin {ωct+I(t)sin ωmt}	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
14	C3	*	35	A11	The sum of	1 C3 A11
15	C4		34	A12	*	15 C4 A12
16	C5	Phase data IN	33	A13		$ \overline{C5}$ $\overline{A13}$ $-$
17	C6	(← PG)	32	A14		— <u>C6</u> A14
18	C7	ωct	31	E10		— C7 E10
19	C8		30	E9		$\overline{C8}$ $\overline{E9}$ 30
20	C 9	in it	29	Ē8		20 C9 E8
21	C10		28	E7	Envelope Control data IN	— <u>C10</u> <u>E7</u> —
22	Ē1	Envelope Control data IN	27	Ē6	for Amplitude (←EG)	<u> </u>
23	E2	For Modulation depth (EG)	26	E5	A(t)	— E2 E5 —
24	Ē3	J A(t)	25	Ē4		$\overline{\underline{24}}$ $\overline{\underline{E3}}$ $\overline{\underline{E4}}$ $\overline{\underline{25}}$

Part Name	YM34502	Function	OPM (Operator-Modulator)
-----------	---------	----------	--------------------------

Tei	rminal	Description	Te	rminal	Description	
Pin No.	Name	Description	Pin No.	Name	Description	1
1	VSS	Ground(OV)	48	φ2	Master clock(1MHz) IN	VSS
2	M1		47	φ1	—do.—(opposite phase of ϕ 2)	$\overline{M1}$
3	M2	, Y	46	VDD	-12V DC Supply IN	<u> </u>
4	М3	* , , , , , ,	45	G1	FM mode Selection data IN	— M3 5 M4
5	M4		44	G2	∫ (← VRG)	IVI
6	M5	Modulation data IN	43	Ā3		— M5
7	M6	(← OPM)	42	Ā4	,	— M6
8	M7	l(t)sin ωmt	41	Ā5		— M7
9	M8		40	Ā6		— M8 10 M 9
10	M9	(for CROSS MODULATION)	39	Ā7		1013
11	M10	·)	38	Ā8	Frequency Modulation	- M10
12	C1		37	Ā3	data OUT	— <u>C1</u>
13	C2		36	A10	(← OPC)	— <u>C2</u>
14	<u>C3</u>		35	A11	<i>y</i>	— C3 (
15	C 4		34	A12	l(t)sin ωmt	704
16	C 5	Phase data IN	33	A13		— <u>C5</u>
17	C6	(← PG)	32	Ā14	J	$-\overline{C6}$
18	C7	7	31	E10		— <u>C7</u>
19	<u>C8</u>	ωmt	30	E9		— <u>C8</u>
20	<u>C9</u>		29	E8	Envelope Control data IN	20 <u>C9</u>
21	C10)	28	E7	For Modulation depth	— C10
22	E1	Envelope Control data IN	27	Ē6	(← EG)	— <u>E1</u>
23	E2	For Modulation depth	26	E5	l(t)	— <u>E2</u>
24	E3	∫ I(t) (←EG)	25	E4	J	24 E3

_1	vss		φ2	48
	M1		ø 1	
	<u>M2</u>		VDD	-
	<u>M3</u>		<u>G</u> 1	45
_5	<u>M4</u>		<u></u>	
	M5		— A3	
	M6		G1 G2 A3 A4 A5	
	M7		 A5	
	M8)2)	A6	<u>40</u>
10	<u>™</u> 9	45(A7	_
_	M10	M3	A8	
	<u>C1</u>	Σ	A9	
	C2 C3	OPM (YM34502	A10	
	<u>C3</u>	ō	A11	35
15	C 4		A12	_
	<u>C5</u>		A13	
_	C6 C7		A14	
	C7		E10	
	<u>C8</u>		E9	30
20	<u>c</u> 9		<u>–</u>	
	C10			
	E1		E6	
-	E2		E5	
<u>24</u>	E3		E4	25
ا ر	<u> </u>			l

Part Name	YM34700	Function	VRG (Voice Register)	-
				160

Terminal		Description		Te	minal	Description
Pin No.	Name	Description		Pin No.	Name	Description
1	VSS	Ground(0V)		48	φB	Master clock(ϕ 1/3) IN
2	NN3	Note data	Key Code	47	φA	-do (opposite phase of ϕB)
3	NN4	Note data	data	46	VDD	-12V DC Supply IN
4	BB1	Block data	IN	45	M	Envelope Mode control (→EG)
5	BB2	Block data	(←CP) (3,,(s×16)	44	R1	
6	BB3	Block data	For scaling	43	R2	
7	SS1	Envelope	State data · IN	42	R3	Rate control data OUT
8	SS2		(←EG)	41	R4	(⇒EG)
9	LOAD	Latch tim	ing data (←RW)	40	R5	/Attack,1st decay,2nd decay)
10	DIN	Serial Tone da	ta(256μs), IN	39	R6	Release time
11	G2) FM mode	select dataOUT	38	L5	
12	G1	. }	(⇒OPM)	37	L6	
13	FD6)		36	L7	Level control data OUT
14	FD5			35	L8	(⇒EG)
15	FD4	Detune d	ata OUT	34	- <u>L9</u>	(Initial level and 1st decay)
16	FD3		(⇒PG)	33	L10	level
17	FD2			32	ITS1	\ Initial touch response
18	FD1			31	TTS2	Sensitivity control data (→EC)
19	FN4)		30	TL4	
20	FN3			29	TL5	
21	FN2	Frequenc	y Control data	28	TL6	Total Level control data
22	FN1		OUT	27	TL7	ООТ
23	FNO	Octave	(⇒ PG)	26	TL8	(⇒EC)
24	TL10	Total Level co	ntrol data (⇒EC)	25	TL9	

_1	vss		øΒ	48
_	NN3		φA	_
	NN4		VDD	_
_	BB1		M	45
5	BB2		R1	<u> </u>
	BB3		R2	
	SS1		R3	<u> </u>
	SS2		R4	<u> </u>
	LOAD		R5	<u>40</u>
10	DIN	700	R6	_
	G2	34	L5	\vdash
	G1	VRG (YM34700	L5 L6 L7	\vdash
	FD6	(7)	<u>L7</u>	<u> </u>
	FD5	V.R.	L8	35
<u>15</u>	FD4			-
	FD3		<u>L10</u>	\vdash
	FD2		ITS1	\vdash
_	FD1		TTS2	
	FN4		TL4	30
<u>20</u>	FN3		TL5	-
	FN2		TL6	-
<u></u>	FN 1		TL7	-
	FNO		TL8	_
<u>24</u>	TL10		TL9	25
				•

Part Name	YM32100	Function	EG (Envelope Generator)
-----------	---------	----------	-------------------------

Terminal		Description		minal	Description	
Pin No.	Name	Description	Pin No.	Name	Description	
1	VSS	Ground(OV)	40	φ2	Master clock(1MHz) IN	
2	Ē	Not Used	39	φ 1	-do (opposite phase of ϕ 2)	
3	Ā2	Channel Occupation data	38	VDD	-12V DC Supply IN	
4	D1	Decay data IN (Key OFF→Decay finish)(♠CP)	37	φB	Master clock(φ1/3) IN	
5	DP	Damp data (←CP)	36	φA	-do (opposite phase of φB)	
6	M	Envelope Mode Control data (+VRG)	35	SS1	Envelope State data OUT	
7	R1		34	SS2	∫(At,1D,2D,R) (⇒VRG)	
8	R2		33	<u>\$1</u>	Not Used	
9	R3	Rate Control data IN	32	<u>\$2</u>	Not Used	
10	R4	(← VRG)	31	E1	1	
11	R5	/Attack,1st decay,2nd decay	30	E2		
12	R6	and Release time	29	E3		
13	L5		28	E4		
14	L6		27	E5	Envelope data OUT	
15	L7	Level Control data IN	26	Ē6	(⇒ EC)	
16	Ī8	(← VRG)	25	E7		
17	L9	/Initial level and 1st Decay	24	Ē8		
18	L10		23	E9		
19	Т	Test Pin	22	E10	J	
20	Т	Test Pin	21	Т	Test Pin	

_1	VSS		φ 2	40
	E A2			-
\dashv	<u>A2</u>		VDD	
_	D1		. φB	
_5	DP.		φA	35
\dashv	M		SS1	35
_	R1		SS2	_
	R2	0	<u>S1</u>	\vdash
10	R3	210	S2	-
10	R4	EG (YM32100)	E1 E2	30
	R5	Σ	E2	
	R6	EG	E3 E4	
	L5		E4	
15	<u>L6</u>		E5	
13	L7		E6	25
	L8 L9		Ē7	
	L9 L10		E8	
			E9	
 20	T		E10	21
			- T	

Part Name YM32200 Function EC (Envelope Con-	troller)
--	----------

Terminal		D	Terminal		Terminal		D			
Pin No.	Name	Description		Name	Description	1		48		
1	VSS	Ground(0V)	48	φ2	Master clock(1MHz) IN		vss	φ2 48		
2	E1		47	φ1	do. (opposite phase of ϕ 2)	_	E1	φ1 		
3	E2		46	VDD	-12V DC supply IN		E2	VDD 45		
4	Ē3		45	φB	Master clock(φ1/3) IN		<u>E3</u>	φB 43		
5	Ē4	*	44	φA	do. (opposite phase of ϕ B)		E4	φ A —		
6	E5	Envelope data IN	43	EC1		-	E5	EC1-		
7	E6	(← EG)	42	EC2			E6	EC2		
8	E7		41	EC3			E7	EC3 40		
9	E8		40	EC4		10	E8	EC4		
10	Ē9	× .	39	EC5		10	E9	6 EC5		
11	E10)*	38	EC6	Envelope Control data		E10	0022£MY) EC2 EC2 EC2 EC3		
12	T1		37	EC7	ОИТ		T1	EC7		
13	T2		36	EC8	(⇒OPC)		T2	()		
14	T3	+	35	EC9	(⇒OPM)	1 5	T3	₩ EC9 35		
15	T4	*	34	EC10	_}	15	T4	EC10-		
16	T5	Touch Control data IN	33	ĒĒ	Envelope Control data (Empty channel detection)		T5	EE		
17	T6	(←IG)	32	TL10			T6	TL10		
18	T7	(← AG)	31	TL9	.*		T7	TL9 30		
19	T8		30	TL8		20	T8	TL8		
20	<u>T9</u>		29	TL7	Total Level Control data	20	<u>T9</u>	TL7		
21	T10	J	28	TL6	IN	_	T10	TL6		
22	ITS1	Initial touch response	27	TL5	(← VRG)		ITS1	TL5		
23	ĪTS2	Sensitivity Control data (~VRG)	26	TL4	1)/-	2.4	ITS2	TL4 25		
24	ATS1	After touch response IN sensitivity Control data (←Switch)	25	ATS2	After touch response sensitivity control data (+Switch)	<u>24</u>	ATS1	ATS2		

Part Name	YM31800	Function	MPX (Multiplexer)
		· · · · · · · · · · · · · · · · · · ·	

Te	Terminal Terminal			1					
Pin No.	Name	Description	Pin No.	Name	Description	1			
1	VSS	Ground(0V)	40	φ2	Master clock(1MHz) IN] -	vss		$\phi 2 \frac{40}{}$
2	SKC	Serial Key Code data IN (9/ℓs×16) (←CP)	39	φ1	—do. — (opposite phase of ϕ 2)	1 -	SKC		φ1 <u></u>
3	CB1)	38	VDD	-12V DC Supply IN	1	CB1		VDD —
4	CB2	Block data IN	37	9Y9	9 time slot synchro data (+CP)		CB2		9Y9 —
5	CB3	Not Used	36	NC	-	_5	CB3		NC
6	CK1	Keyboard data IN	35	NC		ļ	CK1		NC 35
7	CK2	. Keyboard data IN	34	AO	After touch data (→AG)		CK2	<u> </u>	A0
. 8	СО		33	N			СО	800	N —
9	C#1		32	С3			C#1	31	сз
10	D1		31	B2	·	<u>10</u>	D1	(YM31800	В2 —
11	D#1		30	A#2	*		D#1		A#2 30
12	E1		29	A2	. "		E1	MPX	A2
13	F1	,	28	G#2			F1	~	G#2
14	F # 1	After touch voltage IN	27	G2	After touch voltage IN		F#1		G2-
15	G1	(0V~-8V)	26	F # 2	(0V~-8V)	15	G1		F#2
16	G#1		25	F2			G#1		F2 25
17	Α1	*	24	E2			A1		E2
18	A # 1		23	D#2	*		A#1		D#2-
19	В1		22	D2			В1		D2 -
20	C1)	21	C#2	J	<u>20</u>	C1		$C^{*}2^{\frac{21}{}}$

Part Name	YM32000	Function	IG (Initial Touch Generator)
1			Į.

Terminal		Description		rminal	Description	
Pin No.	Name	Description	Pin No.	Name	Description	
1	VSS	Ground(OV)	24	φB	Master clock IN(←CP)	
2	Т	Test Pin	23	φA	do. (opposite phase of ϕB)	
3	U1E	UK Enable data IN	22	VDD	-12V DC Supply IN	
4	L1E	LK Enable data IN	21	T1)	
5	P1E	PK Enable data IN	20	T2	, · · ·	
6	K1	Keyboard data IN(←CP)	19	T3		
7,	<u>K2</u>	Keyboard data IN(←CP)	18	T4	Initial Touch data	
8	ĀZ	Channel occupation data (+CP)	17	T5	ООТ	
9	D1	Decay data (Key OFF→ Decay finish) (←CP)	16	T6	(⇒EC)	
10	NC		15	T7		
11	NC		14	T8		
12	T10	Initial Touch data OUT	13	T9		

1	vss		φΒ	24
	T		φA	
	U1E		VDD	_
	L1E	_	T1	
_5	P1E	IG (YM32000)	<u>T2</u>	20
	<u>K1</u>	32(T3	
	K2	Σ	T4	
	A2	ر ن	T5	-
	D1	<u> </u>	T6	
10	NC		T7	<u>15</u>
	NC		T8	
12	T10		<u>T9</u>	13

Part Name	YM33400	Function	AG (After Touch Generator)
-----------	---------	----------	----------------------------

Ter	minal	Description	Te	minal	Description	
Pin No.	Name	Description		Name	Description	
1	VSS	Ground(OV)	40	φ2	Master clock	IN
2	Т	Test Pin	39	φ1	-do (opposite phase of	f φ2)
3	DCL	Clock for Test	38	VDD	-12V DC Supply	IN
4	Т	Test Pin	37	φB	Master clock(ϕ 1/3)	IN
5	SKC	Serial Key Code data IN (9/ts×16) (←CP)	36	NC		
6	UP	Damper Data(U) IN	35	T1		
7	LP	Damper Data(L) IN	34	T2		
8	PP	Damper Data(P) IN	33	T3		
9	UAF	-Keyboard Selection data(U) IN	32	T4		
10	LAF	Keyboard Selection data(L) IN	31	T5	After Touch data	OUT
11	PAF	Keyboard Selection data(P) IN	30	T6		
12	ĀZ	Channel occupation data (+CP)	29	T7		
13	D1	Decay data (Key OFF→Decay finish) (←CP)	28	T8		
14	DP	Decay finish data (+CP)	27	T9		
15	SCH	Not Used	26	T10	J	
16	9Y9	9 time slot synchro data (←CP)	25	<u>Q1</u>		
17	C	After touch data(Serial) IN	24	Q2	Counter output for	
18	<u>Q8</u>	Countar Outsut for	23	Q3	A-D Conversion	OUT
19	Q7	Counter Output for OUT	22	<u>Q4</u>	A-D Couversion	
20	Q6	A-D Conversion	21	<u>Q</u> 5		

V		_1	vss		φ2	40	
			Т		φ 1		
V			T DCL		VDD	-	
V			Т		φ B		
		5	SKC		NC		
			UP		T1	<u>35</u>	
			LP		T2 T3 T4 T5 T6 T7 T8		
			PP	=	T3	_	
			UAF	100	T4		
Т		10	LAF	337	T5	_	
			PAF	Σ	T6	30	
			A2	AG (YM33400)	T7		
	0	•	D1	Ă	T8		
			DΡ		T9		
		15	SCH		T10	_	
			9 <u>Y9</u>		Q1	<u> 25</u>	
			\overline{c}		02		
T			<u>Q8</u>		03	_	
			T SKC UP IP UAF LAF PAF A2 D1 DP SCH 9Y9 C Q8 Q7 Q6		Q1 Q2 Q3 Q4 Q5		
		<u>20</u>	<u>Q6</u>	8	<u>Q</u> 5	21	
		•				•	

Part Name

Tei	minal		D
Pin No.	Name		
1	VSS	G	iround(0
2	16Y16	16 time slot	
3	<u>K1</u>	Keyboar	
4	K2	K	Ceyboard
5	Ā1)	
6	Ā2		
7	Ā3		0.
8	Ā4		Sound
9	Ā5		data
10	Ā6		
11	Ā7		
12	Ā8)

Part Name

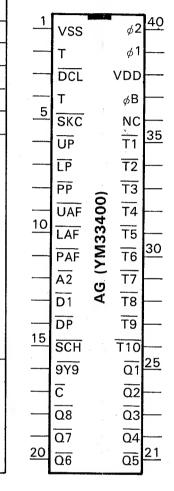
D	Terminal		
	Name	Pin No.	
Ground(C	VSS	1	
16 time slot s	16Y16	2	
Serial sound s	ĪN1	3	
Serial sound :	ĪN2	4	
Not Used	M	5	
) .	S3	6	
Maltiple	S2	7	
)	S1	8	
)	B11	9	
Digital	B10	10	
Anak	B9	11	
]	B8	12	

ch Generator)

1	vss		φB	24
	Т		ϕA	
	U1E		VDD	
	L1E	<u> </u>	T1	
_5	P1E	000	T2	20
	<u>K1</u>	IG (YM32000)	T3	
	<u>K2</u>	Σ	T4	
_	<u>A2</u>	(7)	T5	_
	D1	<u> </u>	T6	
10	NC		T7	15
	NC		T8	
<u>12</u>	T10		T9	13

Part Name	YM33400	Function	AG (After Touch Generator)
-----------	---------	----------	----------------------------

Tei	rminal	Description	Te	rminal	Danasia di La
Pin No.	Name	Description	Pin No.	Name	Description
1	VSS	Ground(0V)	40	φ2	Master clock IN
2	Т	Test Pin	39	φ1	—do. — (opposite phase of ϕ 2)
3	DCL	Clock for Test	38	VDD	-12V DC Supply IN
4	Т	Test Pin	37	φB	Master clock(ϕ 1/3) IN
5	SKC	Serial Key Code data IN (9/2s×16) (←CP)	36	NC	
6	UP	Damper Data(U) IN	35	T1	
7	LP	Damper Data(L) IN	34	T2	e .
8	PP	Damper Data(P) IN	33	T3	
9	UAF	Keyboard Selection data(U) IN	32	T4	*
10	LAF	Keyboard Selection data(L) IN	31	T5	After Touch data OUT
11	PAF	Keyboard Selection data(P)	30	T6	
12	Ā2	Channel occupation data (+CP)	29	T7	*
13	D1	Decay data (Key OFF→Decay finish) (←CP)	28	T8	*
14	DΡ	Decay finish data (+CP)	27	T9	
15	SCH	Not Used	26	T10)
16	9Y9	9 time slot synchro data (←CP)	25	<u>Q1</u>	
17	C	After touch data(Serial) IN	24	Q2	Countar output for
18	<u>Q8</u>	Country Outside	23	Q3	Counter output for A-D Conversion
19	<u>Q7</u>	Counter Output for OUT	22	Q4	A-D Conversion
20	<u>Q6</u>	A-D Conversion	21	Q5	

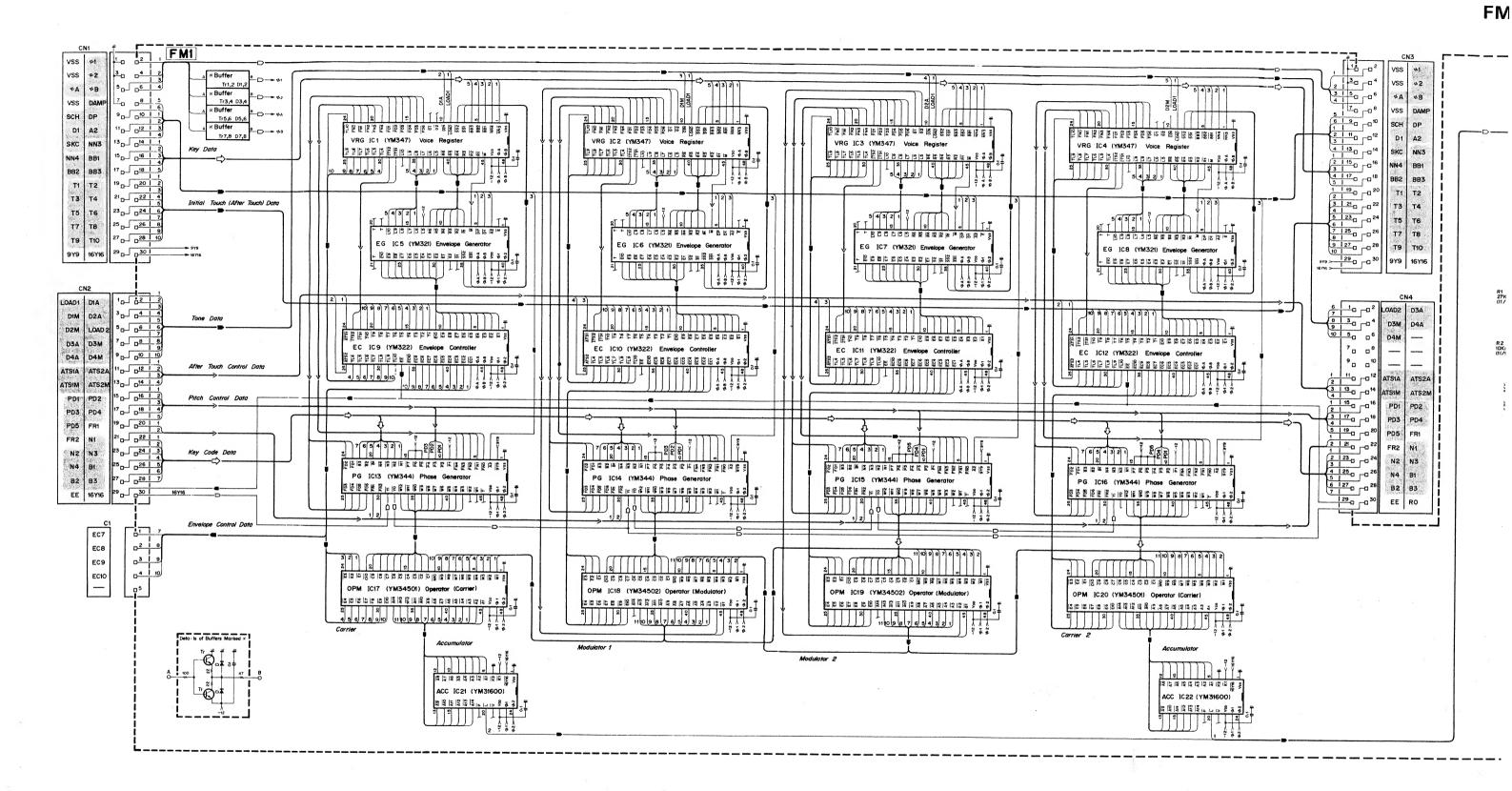


Part Name	YM31600	Function	ACC (Accumulator)

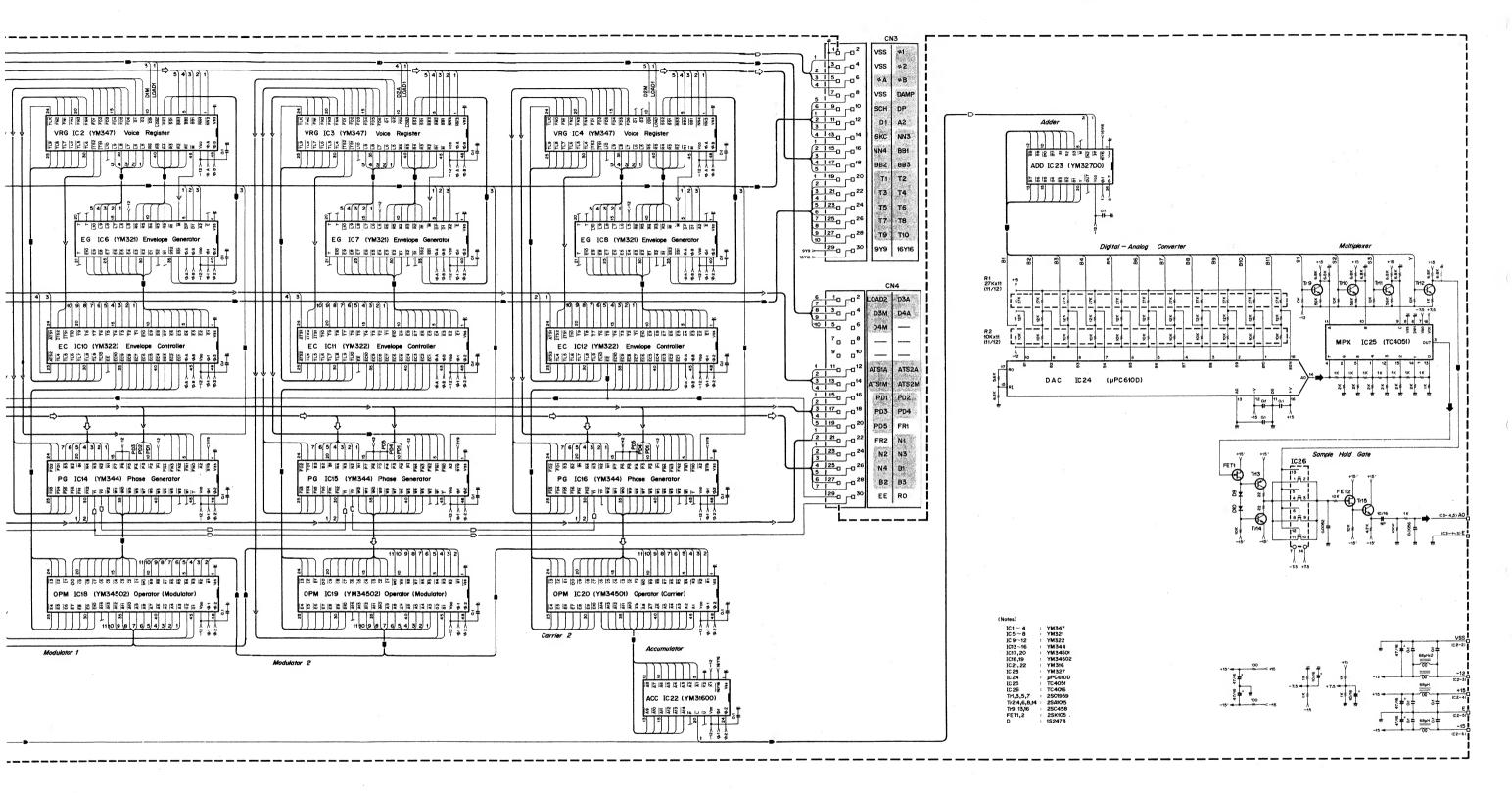
Tei	rminal	Description	Te	rminal	Description			
Pin No.	Name	Description	Pin No	Name	Description	,		
1	VSS	Ground(OV)	24	φ2	Master clock(1MHz) IN		VSS	ϕ^2 24
2	16Y16	16 time slot synchro data (+CP)	23	φ1	—do. – (opposite phase of ϕ 2)		16Y16	ø1
3	K1	Keyboard data (←CP)	22	VDD	-12V DC Supply IN		K1	VDD-
4	K2	Keyboard data (←CP)	21	Ū	UK)		K2 Q	Ū
5	A1		20	T	LK Serial Sound source waveform data	_5	A1 9	20 L
6	ĀŽ		19	P	PK OUT (→ADD)		K2 A1 A2 A3 A3	
7	Ā3		18	A14		*	A3 ≥	A14
8	Ā4	Sound source waveform	17	Ā13			A4 2	A13
9	Ā5	data IN	16	A12	Sound source		Ā5 ⋖	A12
10	Ā6	(← OPC)	15	A11	waveforme data IN	10	Ā6	A11 15
11	Ā7		14	A10	(#OPC)		Ā7	A10
12	Ā8)	13	A 9	J	12	Ā8	A9 13

Part Name YM32700 Function	ADD (Adder)
----------------------------	-------------

	, i	· · · · · · · · · · · · · · · · · · ·	1 -	minal)		
Pin No.	rminal Name	Description	Pin No.	Name	Description	4	-	
1	VSS	Ground(OV)	24	φ2	Master clock(1MHz) IN		vss	φ2 24
2	16Y16	16 time slot synchro data (←CP)	23	ø1	do. (opposite phase of ϕ 2)		16Y16	· ø1
3	ĪN1	Serial sound source data (+ACC)	22	VDD	-12V DC Supply IN		IN 1	VDD
4	ĪN2	Serial sound source data (+ACC)	21	OUT			IN2 8	OUT
5	M	Not Used	20	Υ	Gate control data OUT	_5		
6	S3		19	B1			S3 Z Z Z Z Z Z Z Z Z Z	B1
7	S2	Maltiplex data OUT	18	B2			S2 ≿	B2
8	S1	(→MPX)	17	B3			S1 QQ X	B3
9	B11)	16	<u>B4</u>	Degital code for		B11 ⋖	B4
10	B10	Digital code for	15	B5	Analog convert	10	B10	B5
11	B9	Analog convert OUT	14	B6	OUT	-	B9	B6
12	<u>B8</u>	(⇒DAC)	13	B7	(⇒DAC)	12	B8	B7 13

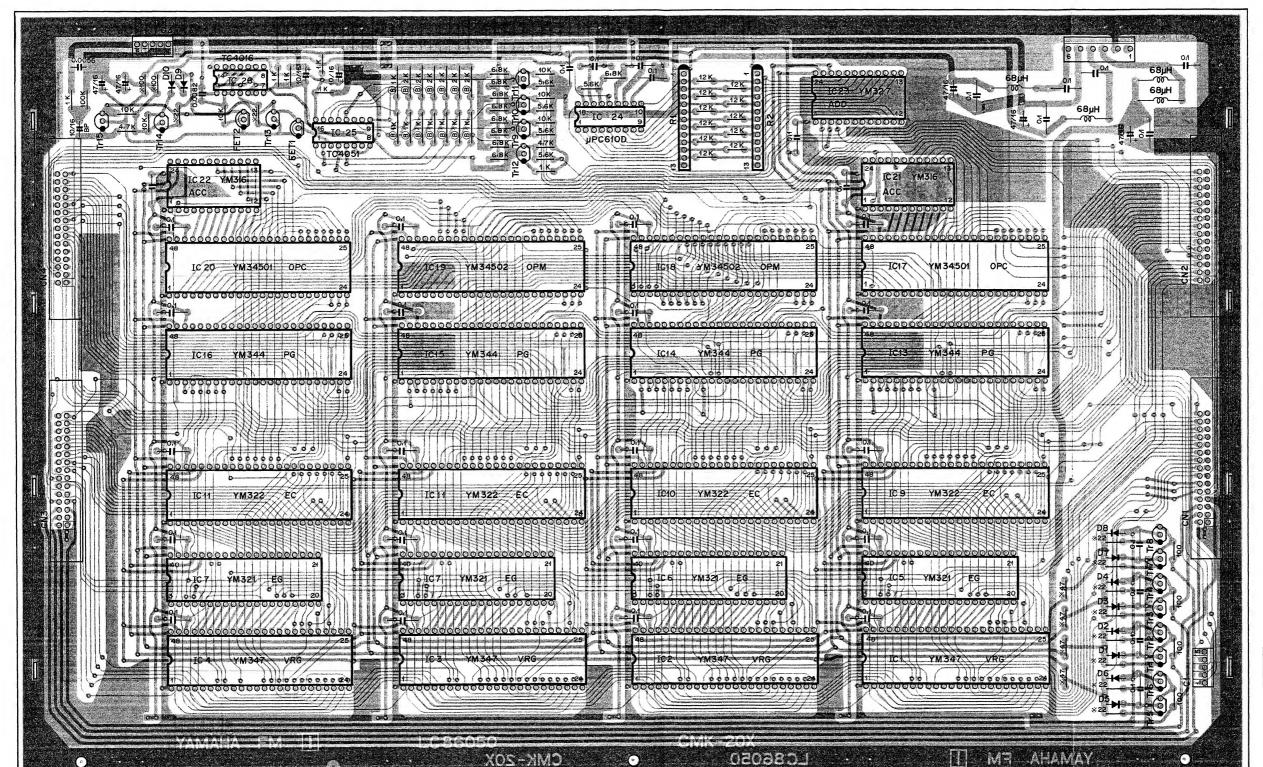


FM Circuit Diagram









GS1

C1

Pin No.	Pin Name	Wire Color	Destination
1	E7	BR	KC-E7 (C8-5)
2	E8	RE	KC-E8 (C8-4)
3	E9	OR	KC-E9 (C8-3)
4	E10	YE	KC-E10 (C8-2
E .			

Pin No.	Pin Name	Wire Color	Destination			
1	-	-	_			
2	Vss	BL	DC-Vss (C6-2)			
3	-12	BE	DC12 (C6-			
4	+15	OR	DC-+15 (C6-6			
5	E	BL	DC-E (C6-5)			
6	-15	BB	DC15 (C6-			

L	6	-15	BR	DC 15 (C6-
			C	3
1	Pin	Pin	Wire	Destinatio
1	No.	Name	Color	
1	1	E	-	_
1	2	E	-	_
1	3	E	SGRS	A-E (C8-4)
Į	4	AO	S GR	A-AI1 (C8-5)
1	5	AO	-	

C2

No.	Name	Color	Destination
1	_	-	_
2	Vss	BL	DC-Vss (C5-2)
3 ,	-12	BE	DC12 (C5-
4	+15	OR	DC-+15 (C5-6
5	E	BL	DC-E (C5-5)
6	15	BR	DC15 (C5-

Pin No.	Pin Name	Wire Color	Destinatio
1	E	_	_
2	E	_	_
3	E	SBES	A-E (C8-2)
4	AO	SBE	A-AI2 (C8-1)
5	AO	_	_

View from the component side of the circuit board

FM Circuit Board & Wiring

GS1

GS2

C1

C1

n 0.	Pin Name	Wire Color	Destination
1	E7	BR	KC-E7 (C8-5)
2	E8	RE	KC-E8 (C8-4)
3	E9	OR	KC-E9 (C8-3)
1	E10	YE	KC-E10 (C8-2)
5			

 Pin No.
 Pin No.
 Wire Color
 Destination

 1
 E7
 YE
 KC-E7 (C8-5)

 2
 E8
 YE
 KC-E8 (C8-4)

 3
 E9
 YE
 KC-E9 (C8-3)

 4
 E10
 YE
 KC-E10 (C8-2)

 5
 —
 —
 —

C2

Pin No.	Pin Name	Wire Color	Destination
1	-	_	-
2	Vss	BL	DC-Vss (C6-2)
3	-12	BE	DC12 (C6-3)
4	+15	OR	DC-+15 (C6-6)
5	E	BL	DC-E (C6-5)
6	-15	BR	DC15 (C6-4)

C3

Pin No.	Pin Name	Wire Color	Destination
1	E	-	_
2	E	-	-
3	E	S GR S	A-E (C8-4)
4	AO	S GR	A-AI1 (C8-5)
5	AO	_	_

 Pin No.
 Pin Name
 Wire Color
 Destination

 1
 E
 —
 —

 2
 E
 S GR S
 —

 3
 E
 S BE S
 —

 4
 AO
 S GR
 A-Al1 (C8-5)

 5
 AO
 S BE
 A-Al2 (C8-1)

C3

N o.	CN Name	Destination
V1	30P FLAT CABLE	(to KC-CN2)
٧2	20P FLAT CABLE	(to KC-CN3)

C2

Pin No.	Pin Name	Wire Color	Destination
1	_	_	_
2	Vss	BL	DC-Vss (C5-2)
3	-12	BE	DC12 (C5-3)
4	+15	OR	DC+15 (C5-6)
5	E	BL	DC-E (C5-5)
6	15	BR	DC15 (C5-4)

СЗ

n S.	Pin Name	Wire Color	Destination
	E	_	_
	E	_	-
	Ε	SBES	A-E (C8-2)
	AO	SBE	A-AI2 (C8-1)
	AO	-	_

(Notes)

1. Circuit Board : LC86510 1

2. Transistors

Tr1, 3, 5, 7 : 2SC1959 (O, Y)
Tr2, 4, 6, 8, 14 : 2SA1015 (O, Y)
Tr9 ~ 13, 15 : 2SC458 (C, D)

3. FET

FET1, 2 : 2SK105 (F)

4. IC

IC1 ~ 4 : YM347 IC5 ~ 8 : YM321 IC9 ~ 12 : YM322 IC13~16 : YM344 IC17, 20 : YM34501 IC18, 19 : YM34502 IC21, 22 : YM316 IC23 : YM327 IC24 : μPC610D

IC26 5. Diodes

IC25

D1 ~ 10 : 1S2473VE

6 Resistor

B marked : 0.1%

* marked : Flame proof carbon film resistor

: TC4051P

: TC4016P

R1 : Resistor 27K x 12 R2 : Resistor 10K x 12

4 E10 3 E9 2 E8 1 E7

68µH

CMK-20X

PEC 610D

LC86050

· · · · · YAMAHA FM

-YM322∕

200000000000

KC Ci

GS1

C1

1 Vss BL DET-Vss (C1-3)
2 V1B RE A-PCO (C7-2)

C2

C3

1 PS1 - -2 PS2 RE TET-TRS (C1-3) 3 DP1 OR DET-SD1 (C1-2)

4 DP2 -
5 DP3 GR DET-SD2 (C1-1)

6 RP1 BE DET-RD1 (C1-4)

7 RP2 VI DET-RD2 (C1-6)

WH CNB-DAMP (C6-6)

3 IC OR A-IC (C5-2)

Destination

Destination

Destination

Pin Pin Wire No. Name Color

Pin No. Name Color

1 \$\phi 2 = -

2 16Y16 -3 SCH -4 KCO -

5 KCI -6 -12 -

C4

C#2 SBR MK1-C#2 (C2-12)

2 C#1 SRE MK1-C#1 (C2-9)

2 C#1 SRE MK1-02 (C2-8)
3 D2 SOR MK1-02 (C2-8)
4 D1 SYE MK1-D1 (C2-5)
5 D#2 SGR MK1-D#2 (C2-4)
6 D#1 SBE MK1-D#1 (C2-1)

E2 S VI MK1-E2 (C3-12)
E1 S GY MK1-E1 (C3-9)

9 F2 SWH MK1-F2 (C3-8) 10 F1 SGG MK1-F1 (C3-5)

11 F#2 S SB MK1-F#2 (C3-4)
12 F#1 S PK MK1-F#1 (C3-1)

Destination

L7 S GR MK2-L7 (C4-2) L6 S RE MK2-L6 (C4-4) 3 L5 S OR MK2-L5 (C4-6) 4 L4 SYE MK2-L4 (C1-8)
5 L3 SGR MK1-L3 (C6-2)
6 L2 SBE MK1-L2 (C6-4)
7 L1 SVI MK1-L1 (C1-1)
8 L0 SGY MK1-L0 (C1-4)

1 G2 S BR MK1-G2 (C4-12) G1 S RE MK1-G1 (C4-9)
G#2 S OR MK1-G#2 (C4-8) 4 G#1 SYE MK1-G#1 (C4-5) 5 A2 S GR MK1-A2 (C4-4) 6 A1 S BE MK1-A1 (C4-1) A#2 SVI MK1-A#2 (C5-12 8 A#1 SGY MK1-A#1 (C5-9) 9 B2 S WH MK1-B2 (C5-8) 10 B1 S GG MK1-B1 (C5-5) 11 C2 S SB MK1-C2 (C5-4) 12 C4 S PK MK1-C1 (C5-1)

Pin No.	Pin Name	Wire Color	Destination
1	-7	GR	DC7 (C7-1)
2	Vss	BL	DC-Vss (C7-2)
3	-12	BE	DC12 (C7-3)
4		-	-
5	E	BL	DC-E (C7-5)
6	+15	OR	DC+15 (C7-6)

C8

		_	•
Pin No.	Pin Name	Wire Color	Destination
1	-	_	-
2	E10	ΥE	FM1-E10 (C1-4)
3	E9	OR	FM1-E9 (C1-3)
4	EB	RE	FM1-E8 (C1-2)
5	E7	BR	FM1-E7 (C1-1)

(Notes)

1. Circuit Board: LC86060 1

2. Transistors

Tr1 ~ 3 : 2SC752 (O, Y) Tr4 : 2SC458 (C, D)

3. IC

IC1, 2 : HD7400

IC4 : TC4009UBP IC5 : HD7404P

IC6, 7 : HD7417P IC8, 9 : SN75366N IC11 : YM312

: YM320 IC12 IC13 : YM311

4. Diodes

D1~8 : 1S2473VE D9 ~ 11 : 10E-1

5. Resistor

R1, 2 : Resistor 470K x 12 R3 : Resistor 4.7K x 12 R4 : Resistor 100K x 10

6. Connector

C1, 8 : NH Connector 5P (T, E) C3 : NH Connector 10P (T, E) C4 : NH Connector 8P (T, E) C5, 6 : NH Connector 12P (T, E) C7 6P (T, E) 3.96 mm : Connector

C8 : NH Connector 3P (T, E) CN1 : Flat cable connector 20P (T, E) CN2, 3 : Flat cable connector 30P (T, E)

3 IC OR A-IC (C5-2) 5 - -

C1

Pin No.	Pin Name	Wire Color	Destination
1	φ2	-	_
2	16Y16	-	_
3	SCH	-	-
4	KCO	_	-
5	KCI	_	_
6	-12		

СЗ

Pin No.	Pin Name	Wire Color	Destination
1	PS1	_	_
2	PS2	_	_
3	DP1	OR	EFF-DP1 (C2-2)
4	DP2	_	_
5	DP3	GR	EFF-DP3 (C2-3)
6	RP1	_	-
7	RP2	_	_
В	RP3	_	_
9	DAMP	WH	FC-P1-6 F/S4P-2
10	_	-	-

C4

GS2

Pin No.	Pin Name	Wire Color	Destination
1	L7	SBR	MK3-L7 (C4-2)
2	L6	SRE	MK3-L6 (C4-4)
3	L5	SOR	MK3-L5 (C4-6)
4	L4	SYE	MK3-L4 (C4-8)
5	L3	SGR	MK4-L3 (C6-2)
6	L2	SBE	MK4-L2 (C6-4)
7	L1	s vi	MK4-L1 (C1-1)
•			

- 1.	,	652	3 DR	MK4-6-2 (62-12)
Г	2	C=1	SRE	MK4-C = 1 (C2-9)
Г	3	D2	SOR	MK4-D2 (C2-8)
Γ	4	D1	SYE	MK4-D1 (C2-5)
Γ	5	D=2	SGR	MK4-D=2 (C2-4)
I	6	D=1	SBE	MK4-D=1 (C2-1)
I	7	E2	SVI	MK4-E2 (C3-12)
Γ	В	E1	SGY	MK4-E1 (C3-9)
Γ	9	F2	SWH	MK4-F2 (C3-8)
I	10	F1	S GG	MK4-F1 (C3-5)
	11	F=2	S SB	MK4-F= 2 (C3-4)
I	12	F=1	SPK	MK4-F=1 (C3-1)
_				

C6

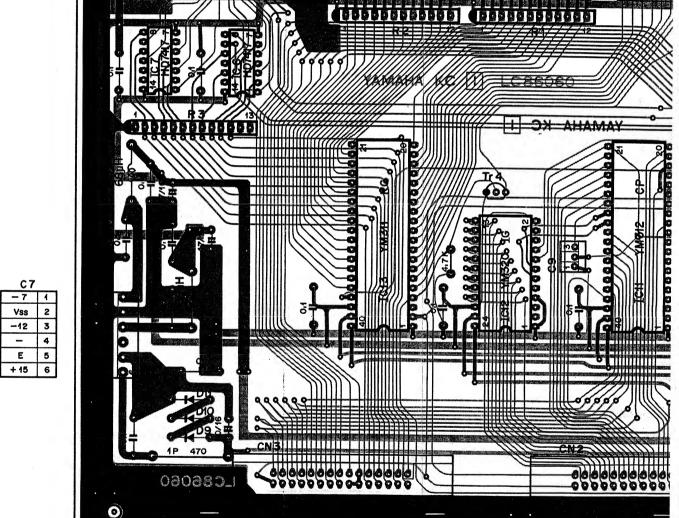
Pin No.	Pin Name	Wire Color	Destination
1	G2	SBR	MK4-G2 (C4-12)
2	G1	SRE	MK4-G1 (C4-9)
3	G# 2	SOR	MK4-G#2 (C4-8)
4	G#1	SYE	MK4-G#1 (C4-5)
5	A2	S GR	MK4-A2 (C4-4)
6	A1	SBE	MK4-A1 (C4-1)
7	A#2	s wi	MK4-A#2 (C5-12)
8	A#1	SGY	MK4- A#1 (C5-9)
9	B2	S WH	MK4-B2 (C5-8)
10	B1	S GG	MK4-B1 (C5-5)
11	C2	S SB	MK4-C2 (C5-4)
12	C1	SPK	MK4-C1 (C5-1)

C7

Pin No.	Pin Name	Wire Color	Destination
1	-7	GR	DC7 (C6-1)
2	Vss	BL	DC-Vss (C6-2)
3	-12	BE	DC12 (C6-3)
4	-	_	_
5	E	BL	DC-E (C6-5)
6	+15	OR	DC-+5 (C6-6)

Pin No.	Pin Name	Wire Color	Destination
1	+	_	_
2	E10	YE	FM-E10 (C1-4)
3	E9	OR	FM-E9 (C1-3)
4	E8	RE	FM-E8 (C1-2)
5	E7	BR	FM-E7 (C1-1)

CN No.	CN Name	Destination
CN1	20P FLAT CABLE	(to RW-CN6)
CN2	30P FLAT CABLE	(to FM-CN1)
CN3	30P FLAT CABLE	(to FM-CN2)



20000000000

View from the component side of the circuit board

9000000

KC Circuit Board & Wiring

GS1

C4

nation	Pin No.	Pin Name	Wire Color	Destination
(C1-3)	1	L7	S GR	MK2-L7 (C4-2)
C7-2)	2	L6	SRE	MK2-L6 (C4-4)
-2)	3	L5	S OR	MK2-L5 (C4-6)
	4	L4	SYE	MK2-L4 (C1-8)
	5	L3	S GR	MK1-L3 (C6-2)
	6	L2	SBE	MK1-L2 (C6-4)
	7	L1	s vI	MK1-L1 (C1-1)
	8	LO	SGY	MK1-L0 (C1-4)

D1 S YE MK1-D1 (C2-5)

| 5 D #2 S GR MK1-D#2 (C2-4)
| 6 D #1 S BE MK1-D#1 (C2-1)
| 7 E2 S VI MK1-E2 (C3-12)
| 8 E1 S GY MK1-E1 (C3-12)
| 9 F2 S WH MK1-E2 (C3-8)
| 10 F1 S GG MK1-F1 (C3-6)
| 11 F#2 S SB MK1-F#2 (C3-4)
| 12 F#1 S PK MK1-F#1 (C3-1)
| 12 C(1-5)
| 13 F#2 S SB MK1-F#1 (C3-1)
| 14 F#2 S SB MK1-F#1 (C3-1)
| 15 C(1-5)
| 16 C(1-6)
| 17 C(1-6)
| 18 C(1-6)
| 19 C(1-6)

4

Destination	Pin No.	Pin Name	Color	Destination
K2-L7 (C4-2)	1	G2	SBR	MK1-G2 (C4-12)
K2-L6 (C4-4)	2	G1	SRE	MK1-G1 (C4-9)
K2-L5 (C4-6)	3	G#2	S OR	MK1-G # 2 (C4-8)
K2-L4 (C1-8)	4	G#1	SYE	MK1-G #1 (C4-5)
K1-L3 (C6-2)	5	A2	S GR	MK1-A2 (C4-4)
K1-L2 (C6-4)	6	A1	SBE	MK1-A1 (C4-1)
K1-L1 (C1-1)	7	A#2	s vi	MK1-A #2 (C5-12
IK1-L0 (C1-4)	8	A#1	SGY	MK1-A #1 (C5-9)
	9	B2	S WH	MK1-B2 (C5-8)
	10	B1	S GG	MK1-B1 (C5-5)
	11	C2	S SB	MK1-C2 (C5-4)
	12	C4	SPK	MK1-C1 (C5-1)

C7

Pin No.	Pin Name	Wire Color	Destination
1	-7	GR	DC7 (C7-1)
2	Vss	BL	DC-Vss (C7-2)
3	-12	BE	DC12 (C7-3)
4	_	-	_
5	E	BL	DC-E (C7-5)
6	+15	OR	DC+15 (C7-6)

C8

Pin No.	Pin Name	Wire Color	Destination
1	-	-	_
2	E10	YE	FM1-E10 (C1-4)
3	E9	OR	FM1-E9 (C1-3)
4	E8	RE	FM1-E8 (C1-2)
5	F7	BB	EM1-E7 (C1-1)

GS2

C4

ination	Pin No.	Pin Name	Wire Color	· Destinati
(C2-1)	1	L7	SBR	MK3-L7 (C4-
C7-2)	2	L6	SRE	MK3-L6 (C4-
5-2)	3	L5	SOR	MK3-L5 (C4-
	4	L4	SYE	MK3-L4 (C4-
_	5	L3	SGR	MK4-L3 (C6-
	6	L2	SBE	MK4-L2 (C6-
	7	L1	s vi	MK4-L1 (C1-

....

No.	Name	Color	Destination
1	C=2	SBR	MK4-C = 2 (C2-12)
2	C=1	SRE	MK4-C = 1 (C2-9)
3	D2	SOR	MK4-D2 (C2-8)
4	D1	SYE	MK4-D1 (C2-5)
5	D=2	SGR	MK4-D=2 (C2-4)
6	D=1	SBE	MK4-D=1 (C2-1)
7	E2	S VI	MK4-E2 (C3-12)
8	E1	SGY	MK4-E1 (C3-9)
9	F2	SWH	MK4-F2 (C3-8)
10	F1	SGG	MK4-F1 (C3-5)
11	F=2	SSB	MK4-F= 2 (C3-4)
12	F=1	SPK	MK4-F=1 (C3-1)

C5

C6

Pin No.	Pin Name	Wire Color	Destination
1	G2	SBR	MK4-G2 (C4-12)
2	G1	SRE	MK4-G1 (C4-9)
3	G#2	S OR	MK4-G#2 (C4-8)
4	G#1	SYE	MK4-G#1 (C4-5)
5	A2	SGR	MK4-A2 (C4-4)
6	A1	SBE	MK4-A1 (C4-1)
7	A#2	s wi	MK4-A#2 (C5-12)
8	A#1	SGY	MK4- A#1 (C5-9)
9	B2	S WH	MK4-B2 (C5-8)
10	B1	S GG	MK4-B1 (C5-5)
11	C2	SSB	MK4-C2 (C5-4)
12	C1	SPK	MK4-C1 (C5-1)

-7 1 Vss 2 -12 3 - 4 E 5

+15 6

C7

× =					
Pin No.	Pin Name	Wire Color	Destination		
1	-7	GR	DC7 (C6-1)		
2	Vss	BL	DC-Vss (C6-2)		
3	-12	BE	DC12 (C6-3)		
4	_	-	_		
5	E	BL	DC-E (C6-5)		
6	44E	OB	DC 45 (CC C)		

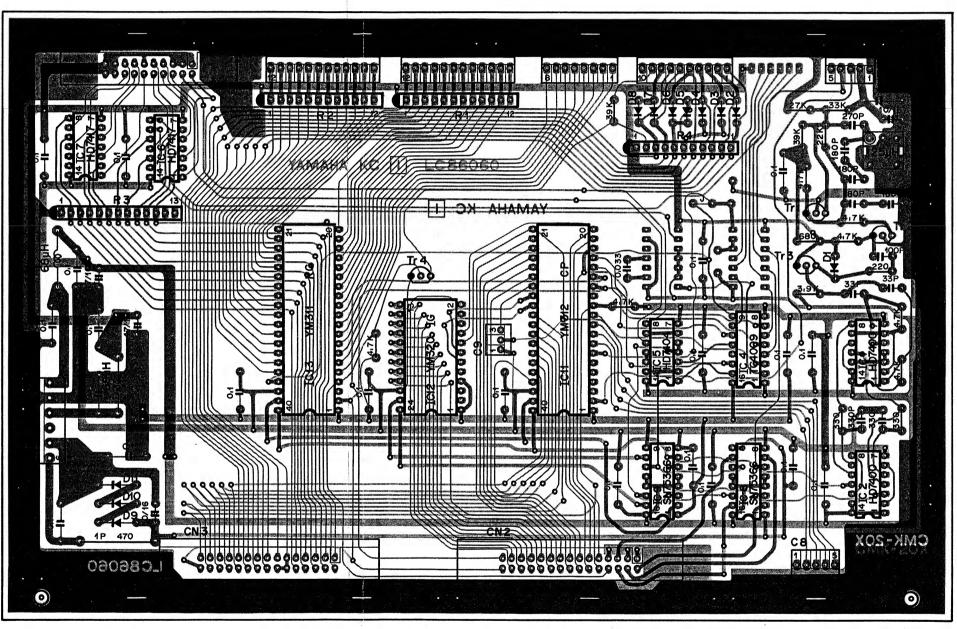
C8

Pin No.	Pin Name	Wire Color	Destination .
1	-	-	_
2	E10	YE	FM-E10 (C1-4)
3	E9	OR	FM-E9 (C1-3)
4	E8	RE	FM-E8 (C1-2)
5	E7	BR	FM-E7 (C1-1)

CN No.	CN Name	Destination
CN1	20P FLAT CABLE	(to RW-CN6)
CN2	30P FLAT CABLE	(to FM-CN1)
CN3	30P FLAT CABLE	(to FM-CN2)

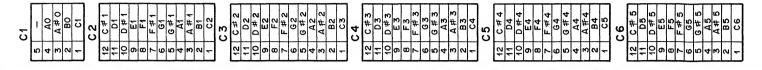
C6 C4 C2 C2 B2 B2 A#1 A#2 A4 A2 A6 C6#2 G#2 G#2 G#2 G6#2	C5 F#1 F#2 D#4 D#2 D#2 D#2 C D2 C D2	4 4 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
21-0000-00460-	12 C 0 8 C 0 0 4 W 0	- 00

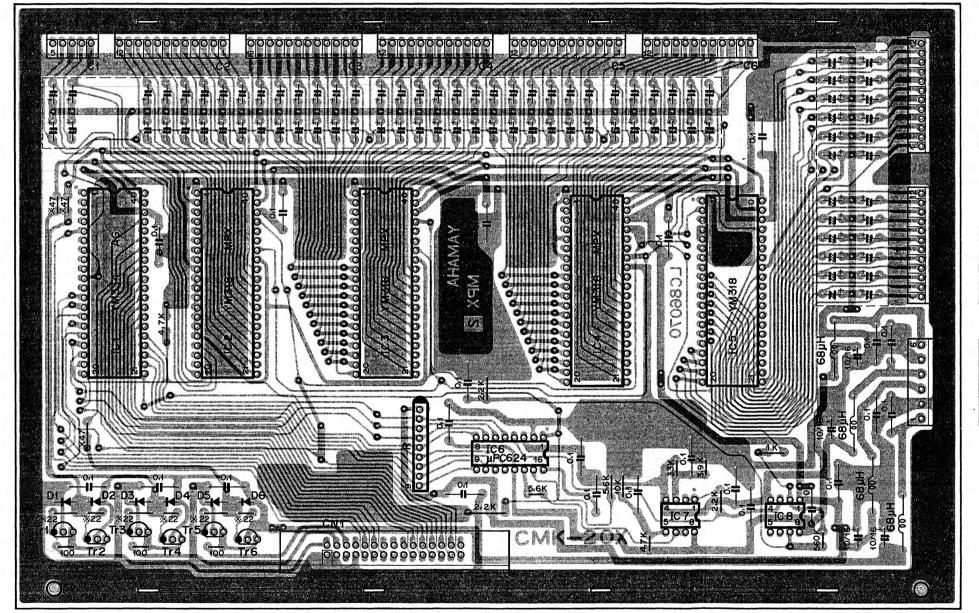




View from the component side of the circuit board







View tro	m the	componen	t side	ot	the	circuit	board	
----------	-------	----------	--------	----	-----	---------	-------	--

	C 7	
12	C#6	l
11	D6	
10	D#6	
9 8	E6 F6	
8	F6	
7	F#6	
6	G6	
5	G#6	
4	A6	
3	A#6	
2	B6	-
4	CZ	

	C 8	
12 11 10 9 8 7 6 5 4 3	C#7	
11	D7	
9	D#7	
ø	E7	
8	F7	
7	F#7	
ω	G7	
5	G#7	
4	A7	
3	A#7	
2	B7	
1	C8	

	C9	
6	+15	
5	E	
4	-15	
3	-12	
2	Vss	
1	-7	

-	C# 3	ne l	PCA3-C# (C1-1)
	4,	С	5
in lo.	Pin Name	Wire Color	Destination
1	C5	BR	PCA4-C (C3-5)
2	B4	PK	PCA4-B (C3-4)
3	A#4	SB	PCA4-A# (C3-3)
4	A4	GG	PCA4-A (C3-2)
5	G#4	WH	PCA4-G# (C3-1)
6	G4	GY	PCA4-G (C1-7)
7	F#4	VI	PCA4-F# (C1-6)
В	F4	BE	PCA4-F (C1-5)
9	EA	GB	PCAA.E (C1.4)

C1	
•.	

	Pin Name	Wire Color	Destination	Pir No	
1	C1	BR	PCB-C (C1-4)] [1	C6
	BO	PK	PCB-B (C1-3)	2	B5
	A#0	SB	PCB-A# (C1-2)	3	A # 5
	AO	GG	PCB-A (C1-1)	4	A5
	-	_	_	5	G# 5
				6	G5
	1	C	2	7	F# 5

Pin No.	Pin Name	Wire Color	Destination
1	C2	BR	PCA1-C (C3-5)
2	B1	PK	PCA1-B (C3-4)
3	A#1	SB	PCA1-A# (C3-3)
4	A1	GG	PCA1-A (C3-2)
5	G# 1	WH	PCA1-G# (C3-1)
6	G1	GY	PCA1-G (C1-7)
7	F#1	VI	PCA1-F# (C1-6)
8	F1	BE	PCA1-F (C1-5)
9	E1	GR	PCA1-E (C1-4)
10	D# 1	YE	PCA1-D# (C1-3)
11	Di	OR	PCA1-D (C1-2)
12	C#1	RE	PCA1-C # (C1-1)

C3

Pin No.	Pin Name	Wire Color	Destination
1	C3	BR	PCA2-C (C3-5)
2	B2	PK	PCA2-B (C3-4)
3	A#2	SB	PCA2-A# (C3-3)
4	A2	GG	PCA2-A (C3-2)
5	G#2	WH	PCA2-G # (C3-1)
6	G2	GY	PCA2-G (C1-7)
7	F#2	VI	PCA2-F # (C1-6)
8	F2	BE.	PCA2-F (C1-5)
9	E2	GR	PCA2-E (C1-4)
10	D# 2	YE	PCA2-D # (C1-3)
11	D2	OR	PCA2-D (C1-2)
12	C# 2	RE	PCA2-C # (C1-1)

C4

Pin No.	Pin Name	Wire Color	Destination
1	C4	BR	PCA3-C (C3-5)
2	В3	PK	PCA3-B (C3-4)
3	A#3	SB	PCA3-A# (C3-3)
4	A3	GG	PCA3-A (C3-2)
5	G#3	WH	PCA3-G# (C3-1)
6	G3	GY	PCA3-G (C1-7)
7	F#3	VI	PCA3-F# (C1-6)
8	F3	BE	PCA3-F (C1-5)
9	E3	GR	PCA3-E (1-4)
10	D#3	YE	PCA3-D# (C1-3)
11	D3	OR	PCA3-D (C1-2)
12	C#3	RE	PCA3-C# (C1-1)

. C5					
Pin No.	Pin Name	Wire Color	Destination		
1	C5	BR	PCA4-C (C3-5)		
2	В4	PK	PCA4-B (C3-4)		
3	A#4	SB	PCA4-A# (C3-3)		
4	A4	GG	PCA4-A (C3-2)		
5	G#4	WH	PCA4-G# (C3-1)		
6	G4	GY	PCA4-G (C1-7)		
7	F#4	VI	PCA4-F# (C1-6)		
8	F4	BE	PCA4-F (C1-5)		
9	E4	GR	PCA4-E (C1-4)		
10	D#4	YE	PCA4-D# (C1-3)		
11	D4	OR	PCA4-D (C1-2)		
12	C#4-	RE	PCA4-C # (C1-1)		

	No.	Name	Color	Destination
7	1	C6	BR	PCA5-C (C3-5)
	2	B5	PK	PCA5-B (C3-4)
7	3	A#5	SB	PCA5-A # (C3-3)
7	4	A5	GG	PCA5-A (C3-2)
	5	G#5	WH	PCA5-G# (C3-1)
	6	G5	GY	PCA5-G (C1-7)
	7	F# 5	VI	PCA5-F# (C1-6)
_	8	F5	BE	PCA5-F (C1-5)
	9	E5	GR	PCA5-E (C1-4)
\dashv	10	D#5	YE	PCA5-D# (C1-3)
4	11	D5	OR	PCA5-D (C1-2)
4	12	C#5	RE	PCA5-C# (C1-1)

C6

C7

Pin No.	Pin Name	Wire Color	Destination
1	C7	BR	PCA6-C (C3-5)
2	В6	PK	PCA6-B (C3-4)
3	A#6	SB	PCA6-A# (C3-3)
4	A6	GG	PCA6-A (C3-2)
5	G#6	WH	PCA6-G # (C3-1)
6	G6	GY	PCA6-G (C1-7)
7	F#6	VI	PCA6-F # (C1-6)
8	F6	BE	PCA6-F (C1-5)
9	E6	GR	PCA6-E (C1-4)
10	D#6	YE	PCA6-D # (C1-3)
11	D6	OR	PCA6-D (C1-2)
12	C#6	RE	PCA6-C# (C1-1)

C8

Pin No.	Pin Name	Wire Color	Destination
1	-C8	BR	PCA7-C (C3-5)
2	B7	PK	PCA7-B (C3-4)
3	A#7	SB	PCA7-A# (C3 3)
4	A7	GG	PCA7-A (C3-2)
5	G#7	WH	PCA7 (G # (C3-1)
6	G7	GY	PCA7-G (C1-7)
7	F#7	VI	PCA7-F# (C1-6)
8	F7	BE	PCA7-F (C1-5)
9	E7	GR	PCA7-E (C1-4)
10	D#7	YE	PCA7-D# (C1-3)
11	D7	OR	PCA7-D (C1-2)
12	C#7	RE	PCA7-C# (C1-1)

С	9	1. Circuit Board:
Wire Color	Destination	2. Transistors
GR	DC 7 (C4-1)	Tr1, 3, 5 : 25
BL	DC-Vss (C4-2)	
BE	DC12 (C4-3)	Tr2, 4, 6 : 25
BR	DC15 (C4-4)	3. IC
BL	DC-E (C4-5)	3. 10
OR	DC-+15 (C4-6)	IC1 : YI

IC6

(Notes)

₹.	Diodes		
	D1 ~ 6		
5.	Resistor		

IC2 ~ 5 : YI

: μF

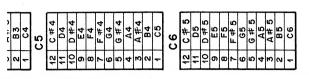
: N.

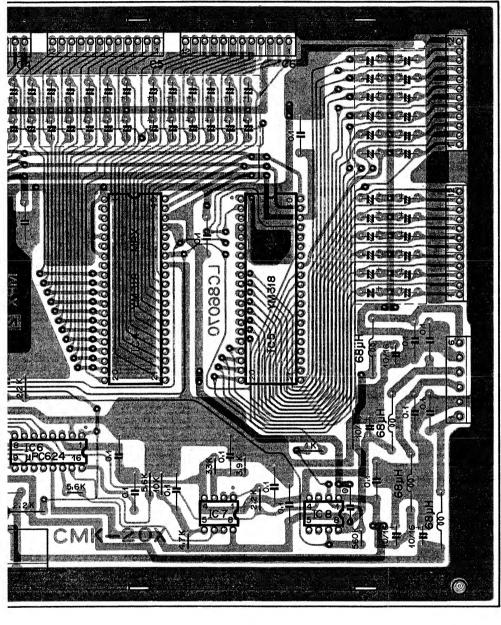
: μF

: 18

R marked : Re * marked : FI

MPX Circuit Board & Wiring





	C 7		
	12	C#6	
	11	D6	
	10	D#6	
	9	E6 F6	
+	8		
	7	F#6	
	6 5	G6	
	5	G ≠ 6	
	4	Α6	
	3	A#6	
	2	B6	
	1	C7	
	1	C7	

	CB		
12	C#7		
11	D7 D#7		
10	D#7		
9	E7		
10 9 8	F7		
1.7	F#7		
6	G7		
5	G#7		
4	A7		
3 2	A#7		
2	B7		
1	C8		

	C9		
1	6	+15	
	5	Ε	
	4	-15	
	3	-12	
	2	Vss	
	1	-7	

Pin No.	Pin Name	Wira Color	Destination
1	C1	BR	PCB-C (C1-4)
2	ВО	PK	PCB-B (C1-3)
3	A#0	SB	PCB-A# (C1-2)
4	AO	GG	PCB-A (C1-1)
5	-	-	_
			2

Pin No.	Pin Nama	Wire Color	Destination
1	C2	BR	PCA1-C (C3-5)
2	B1	PK	PCA1-B (C3-4)
3	A#1	SB	PCA1-A # (C3-3)
4	A1	GG	PCA1-A (C3-2)
5	G#1	WH	PCA1-G# (C3-1)
6	G1	GY	PCA1-G (C1-7)
7	F#1	VI	PCA1-F# (C1-6)
8	F1	BE	PCA1-F (C1-5)
9	E1	GR	PCA1-E (C1-4)
10	D# 1	YE	PCA1-D# (C1-3)
11	D1	OR	PCA1-D (C1-2)
12	C#1	RE	PCA1-C # (C1-1

Pin No:	Pin Name	Wire Color	Destination
1	C3	BR	PCA2-C (C3-5)
2	B2	PK	PCA2-B (C3-4)
3	A#2	SB	PCA2-A# (C3-3)
4	A2	GG	PCA2-A (C3-2)
5	G# 2	WH	PCA2-G # (C3-1)
6	G2	GY	PCA2-G (C1-7)
7	F#2	VI	PCA2-F # (C1-6)
8	F2	BE	PCA2-F (C1-5)
9	E2	GR	PCA2-E (C1-4)
10	D# 2	YE	PCA2-D # (C1-3)
11	D2	OR	PCA2-D (C1-2)
12	C#2	RE	PCA2-C # (C1-1)

Pin No.	Pin Nama	Wire Color	Destination
1	C4	BR	PCA3-C (C3-5)
2	B3	PK	PCA3-B (C3-4)
3	A#3	SB	PCA3-A# (C3-3)
4	A3	GG	PCA3-A (C3-2)
5	G#3	WH	PCA3-G# (C3-1)
6	G3	GY	PCA3-G (C1-7)
7	F#3	VI	PCA3-F# (C1-6)
8	F3	BE	PCA3-F (C1-5)
9	E3	GR	PCA3-E (1-4)
10	D#3	YE	PCA3-D# (C1-3)
11	D3	OR	PCA3-D (C1-2)
12	C#3	RE	PCA3-C# (C1-1)

_	_		
Destination	Wira Color	Pin Name	Pin No.
PCA4-C (C3-5)	BR	C5	1
PCA4-B (C3-4)	PK	B4	2
PCA4-A# (C3-	SB	A#4	3
PCA4-A (C3-2)	GG	Α4	4
PCA4-G# (C3-	WH	G#4	5
PCA4-G (C1-7)	GY	G4	6
PCA4-F# (C1-	VI	F#4	7
PCA4-F (C1-5)	BE	F4	8
PCA4-E (C1-4)	GR	E4	9
PCA4-D# (C1-	YE	D#4	10
PCA4-D (C1-2)	OR	D4	11
PCA4-C # (C1-	RE	C#4-	12

	No.	Name	Color	Destination
1	1	C6	BR	PCA5-C (C3-5)
1	2	B5	PK	PCA5-B (C3-4)
	3	A#5	SB	PCA5-A # (C3-3)
	4	A5	GG	PCA5-A (C3-2)
	5	G# 5	WH	PCA5-G# (C3-1)
	6	G5	GY	PCA5-G (C1-7)
	7	F# 5	VI	PCA5-F# (C1-6)
_	8	F5	BE	PCA5-F (C1-5)
ı	9	E5	GR	PCA5-E (C1-4)
1	10	D# 5	YE	PCA5-D# (C1-3)
1	11	D6	OR	PCA5-D (C1-2)
1	12	C#5	RE	PCA5-C# (C1-1)

C7

Pin No.	Pin Name	Wira Color	Destination
1	C7	BR	PCA6-C (C3-5)
2	В6	PK	PCA6-B (C3-4)
3	A#6	SB	PCA6-A# (C3-3)
4	A6	GG	PCA6-A (C3-2)
5	G#6	WH	PCA6-G # (C3-1)
6	G6	GY	PCA6-G (C1-7)
7	F#6	VI	PCA6-F# (C1-6)
8	F6	BE	PCA6-F (C1-5)
9	E6	GR	PCA6-E (C1-4)
10	D#6	YE	PCA6-D# (C1-3)
11	D6	OR	PCA6-D (C1-2)
12	C#6	RE	PCA6-C# (C1-1)

Pin No.	Pin Nama	Wira Color	Destinetion
1	C8	BR	PCA7-C (C3-5)
2	B7	PK	PCA7-B (C3-4)
3	A#7	SB	PCA7-A# (C3 3)
4	A7	GG	PCA7-A (C3-2)
5	G#7	WH	PCA7 (G# (C3-1)
6	G7	GY	PCA7-G (C1-7)
7	F#7	VI	PCA7-F# (C1-6)
8	F7	BE	PCA7-F (C1-5)
9	E7	GR	PCA7-E (C1-4)
10	D#7	YE	PCA7-D# (C1-3)
11	D7	OR	PCA7-D (C1-2)
12	C#7	RE	PCA7-C# (C1-1)

C9								
in Io.	Pin Name	Destination						
1	-7	GR	DC 7 (C4-1)					
2	Vss	BL	DC-Vss (C4-2)					
3	-12	BE	DC12 (C4-3)					
4	-15	BR	DC15 (C4-4)					
5	E	BL	DC-E (C4-5)					
6	+15	OR	DC-+15 (C4-6)					

(Notes)

2. Transistors Tr1, 3, 5 : 2SC1959 (O, Y)

1. Circuit Board: LC86070 2

Tr2, 4, 6 : 2SA1015 (Y)

3. IC

IC1 : YM334 IC2 ~ 5 : YM318 IC6 : μPC624 IC7 : NJM4558DV IC8 : μPC311C

4. Diodes

D1~6 : 1S2473VE

5. Resistor

R marked : Resistor 4.7K x 8

* marked : Flame proof carbon film resistor.

GS1

C1							C	3
Pin No.	Pin Name	Wire Color	Destination		Pin No.	Pin Name	Wire Color	Destination
1	S1	BR	SELL-S1 (C1-8)	ı	1	S1	BR	SELR-S1 (C1-8)
2	L1	RE	SELL-L1 (C1-7)	ı	2	L9	RE	SELR-L9 (C1-7)
3	S2	OR	SELL-S2 (C1-6)	١	3	S2	OR	SELR-S2 (C1-6)
4	L2	YE	SELL-L2 (C1-5)	ı	4	L10	YE	SELR-L10 (C1-5)
5	S3	GR	SELL-S3 (C1-4)	١	5	S3	GR	SELR-S3 (C1-4)
6	L3	BE	SELL-L3 (C1-3)	ı	6	L11	BE	SELR-L11 (C1-3)
7	S4	VI	SELL S4 (C1-2)	١	7	S4	VI	SELR-S4 (C1-2)
8	L4	GY	SELL-L4 (C1-1)	lt	8	L12	GY	SELR-L12 (C1-1)
9	WRITE	WH	CNB-WRITE (C7-6)	١t	9	PLK	SB	CNB-PLK (C7-8)
10	-12	BE	CNB12 (C7-7)	١t	10	S1	BR	CNB-S1 (C7-9)
C2							С	4

	Pin No.	Pin Name	Wire Color	Destination
	1	STRD	BR	LED-1
	2	REV	RE	CR-REV (C1-1)
	3	MSW	OR	CR-MSW (C1-6)
5)	4	WPR	YE	CR-WPR (C1-5)
	5	WEN	GR	CR-WEN (C1-3)
3)	6	WDT	BE	CR-WDL (C1-4)
	7	CLD	٧I	CR-CLD (C1-7)
)	8	MON	GY	CR-MON (C1-8)
7	9	RCK	WH	CR-RCK (C1-9)
\neg	10	RDT	GG	CR-RDT (C1-10)
_	11	-7	GR	CR-+5V (C1-11)
	12	-12	BE	CR-GND (C1-12)
	_			

C7

Pin No.	Pin Name	Wire Color	Destination
1	-12	BE	DC12 (C11-1)
2	PON	PK	DC-PON (C11-2)
3	-7B	VI	DC7B (C11-3)

1 S5 BR SELR-S5 (C2-8)
2 L13 RE SELR-L13 (C12-7)
3 S6 OR SELR-S6 (C2-6)
4 L14 YE SELR-L14 (C2-5)
5 S7 GR SELR-S7 (C2-4)
6 L15 BE SELR-L15 (C2-3)
7 S8 VI SELR-S8 (C2-2)
8 L16 GY SELR-L16 (C2-1)
9 ST1 PK SELR-ST1 (C1-9)
10 Vs BL SELR-Vs (C1-10)

	C8								
Pin No.	Pin Name	Wire Color	Destination						
1	-7	GR	DC7 (C3-1)						
2	Vss	BL	DC-Vss (C3-2)						
3	-12	BE	DC12 (C3-3)						
4									
5									
6									

GS2

Pin No.	Pin Name	Wire Color	Destination	1	Pin No.	Pin Name	Wire Color	Destination
1	S1	BR	SELL-S1 (C2-2)	1	1	S1	BR	SELR-S1 (C1-4)
2	L1	RE	SELL-L1 (C2-1)	1	2	L9	RE	SELR-L9 (C1-3)
3	S2	OR	SELL-S2 (C2-4)	1	3	S2	OR	SELR-S2 (C1-6)
4	L2	YE	SELL-L2 (C2-3)	1	4	L10	YE	SELR-L10 (C1-5)
5	S3	GR	SELL-S3 (C2-6)	1	5	S3	GR	SELR-\$3 (C1-8)
6	L3	BE	SELL-L3 (C2-5)	1	6	L11	BE	SELR-L11 (C1-7
7	S4	VI	SELL-S4 (C2-8)	1	7	S4	VI	SELR-\$4 (C1-10)
8	L4	GY	SELL-L4 (C2-7)	1	8	L12	GY	SELR-L12 (C1-9
9	WRT	WH	STO-WRT (C1-1)	1	9	PLK	WH	LOCK SW-center termin
10	-12	RE	STO12 (C1-5)	1	10	S1	-	_

| Pin | Pin | Pin | Pire | Pir

Pin No.	Pin Name	Wire Color	Destination
1	-12	BE	DC12 (C7-1)
2	PON	GR	DC-PON (C7-3)
3	-7B	VI	DC7B (C7-5)

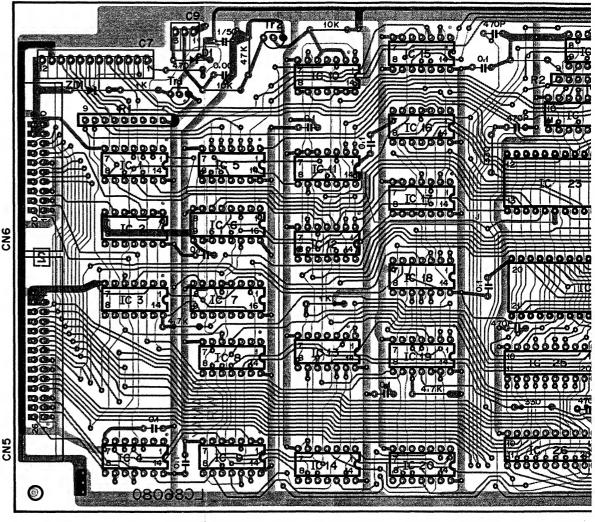
C3

Pin No.	Pin Name	Wire Color	Destination	П	Pin No.	Pin Name	Wire Color	Destination
1	S5	BR	SELL-S5 (C3-4)	П	1	S5	BR	SELR-S5 (C2-2)
2	L5	RE	SELL-L5 (C3-3)	П	2	L13	RE	SELR-L13 (C2-1)
3	S6	OR	SELL-S6 (C3-6)	П	3	S6	OR	SELR-S6 (C2-4)
4	L6	YE	SELL-L6 (C3-5)	١	4	L14	YE	SELR-L14 (C2-3)
5	S7	GR	SELL-S7 (C3-8)	1	5	S7	GR	SELR-S7 (C2-6)
6	L7	BE	SELL-L7 (C3-7)	1	6	L15	BE	SELR-L15 (C2-5)
7	S8	VI	SELL-S8 (C3-10)	١	7	58	VI	SELR-S8 (C2-8)
8	L8	GY	SELL-L8 (C3-9)	1	8	L16	GY	SELR-L16 (C2-7)
9	STO	GG	SELL-STO (C3-1)	1	9	ST1	PK	SELR-ST1 (C1-1)
10	Vss	-	-	1	10	Vss	-	_

C2

Pin No.	Pin Name	Wire Color	Destination			
1	-7	GR	DC7 (C4-1)			
2	Vss	BL	DC-Vss (C4-2)			
3	-12	BE	DC12 (C4-3)			
4	-	_	_			
5	-	_	_			
6	_	-	_			

))



View from the component side of the circuit board

•	terr troil the compone	int state of the t	onioant Board		
(Notes)					
1. Circuit Boa	rd: LC86080 2	IC6	: TC4027BP	IC27	: TC4028BP
2. Transistors		IC7	: TC40161BP	IC28	: HD74LS138P
Tr1	: 2SA509 (O, Y)	IC9, 16, 20	: HD74LSOOP	IC29, 30	: TC5516P
Tr2	: 2SC458 (C)	IC10	: TC40HO32P	IC31, 32	: HD74145
3. Diodes		IC11	: TC4011BP	IC33	: MB8516
D1	: 1N34A	IC14	: HC74LS20P	IC34	: SN74LS273
ZD1	: RD3.6EB1	IC15, 17	: TC4013BP	IC35, 36	: HD74LS161P
4. IC		IC19	: HD74LS74A	5. Capacito	r
IC1	: HD7416	IC21	: HD74LS366	0.1	: Ceramic capacitor
IC2, 13	: HD74LSO8P	IC22	: HD74LS240P	mark	ed: Cerarock capacitor CSA6.00
IC3	: TC4024BP	IC23	: μPD8243	6. Resistor	
IC4, 8, 18	: HD74LSO4P	IC24	: μPD8035	R1, 2, 3	: 4.7K x 8 (Resistor)

IC25, 26 : SN72LS245

56 RW Circuit Board & Wiring

7. (

G G

IC5, 12 : TC4069UBP

RW Circuit Board & Wiring

GS1

C3						
	Wire Color	Destination				
	BR	SELR-S1 (C1-8)	ı			
	RE	SELR-L9 (C1-7)				
	OR	SELR-S2 (C1-6)				
	YE	SELR-L10 (C1-5)				
	GR	SELR-S3 (C1-4)				
	BE	SELR-L11 (C1-3)				
	VI	SELR-S4 (C1-2)				
	GY	SELR-L12 (C1-1)				
		ONID DI 14 (07 0)				

rtion	Pin No.	Pin Name	Wire Color	Destination
C1-8)	1	STRD	BR	LED-1
(C1-7)	2	REV	RE	CR-REV (C1-1)
C1-6)	3	MSW	OR	CR-MSW (C1-6)
(C1-5)	4	WPR	YE	CR-WPR (C1-5)
C1-4)	5	WEN	GR	CR-WEN (C1-3)
(C1-3)	6	WDT	BE	CR-WDL (C1-4)
C1-2)	7	CLD	VI	CR-CLD (C1-7)
(C1-1)	8	MON	GY	CR-MON (C1-8)
(C7-8)	9	RCK	WH	CR-RCK (C1-9)
7-9)	10	RDT	GG	CR-RDT (C1-10)
	11	-7	GR	CR-+5V (C1-11)
	12	-12	BE	CR-GND (C1-12)

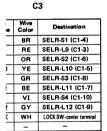
Pin No.	Pin Name	Wire Color	Destination		Pin No.	Pin Name	Wire Color	
1	STRD	BR	LED-1		1	-12	BE	Ī
2	REV	RE	CR-REV (C1-1)		2	PON	PK	Ī
3	MSW	OR	CR-MSW (C1-6)		3	-7B	VI	Ī
4	WPR	YE	CR-WPR (C1-5)					_
5	WEN	GR	CR-WEN (C1-3)					
6	WDT	BE	CR-WDL (C1-4)					
7	CLD	VI	CR-CLD (C1-7)					
8	MON	GY	CR-MON (C1-8)					
9	RCK	WH	CR-RCK (C1-9)	ı				
10	RDT	GG	CR-RDT (C1-10)					
11	-7	GR	CR-+5V (C1-11)					
12	-12	RE	CR-GND (C1-12)					

٠	SIND	BH	LED-1
2	REV	RE	CR-REV (C1-1)
3	MSW	OR	CR-MSW (C1-6)
4	WPR	YE	CR-WPR (C1-5)
5	WEN	GR	CR-WEN (C1-3)
6	WDT	BE	CR-WDL (C1-4)
7	CLD	VI	CR-CLD (C1-7)
8	MON	GY	CR-MON (C1-8)
9	RCK	WH	CR-RCK (C1-9)
10	RDT	GG	CR-RDT (C1-10)
11	-7	GR	CR-+5V (C1-11)
12	-12	BE	CR-GND (C1-12)

•			3		
	BR	SELR-S5 (C2-8)	١.		
3	RE	SELR-L13 (C12-7)	П	Pin	Ι,
	OR	SELR-S6 (C2-6)		No.	Ľ
Γ	YE	SELR-L14 (C2-5)		1	L
_	GR	SELR-S7 (C2-4)		2	L
;	BE	SELR-L15 (C2-3)		3	L
_	VI	SELR-S8 (C2-2)	H	4	L
;	GY	SELR-L16 (C2-1)	H	5	L
ī	PK	SELR-ST1 (C1-9)	L	6	L
-	BL	SELR-Vss (C1-10)			

Pin No.	Pin Name	Wire Color				
1	-7	GR	DC7 (C3-1)			
2	Vss	BL	DC-Vss (C3-2)			
3	-12	BE	DC12 (C3-3)			
4						
5						
6						

GS2



	C4						
	Wire Color	Destination					
	BR	SELR-S5 (C2-2)					
	RE	SELR-L13 (C2-1)					
1	OR	SELR-S6 (C2-4)					
	YE	SELR-L14 (C2-3)					
	GR	SELR-S7 (C2-6)					
;	BE	SELR-L15 (C2-5)					
	VI	SELR-S8 (C2-8)					
;	GY	SELR-L16 (C2-7)					
1	PK	SELR-ST1 (C1-1)					

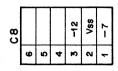
	C8							
Pin No.	Pin Name	Wire Color	Destination					
1	-7	GR	DC7 (C4-1)					
2	Vss	BL	DC-Vss (C4-2)					
3	-12	BE	DC12 (C4-3)					
4	_	-	-					
5	_	-	-					
6	_	_	-					

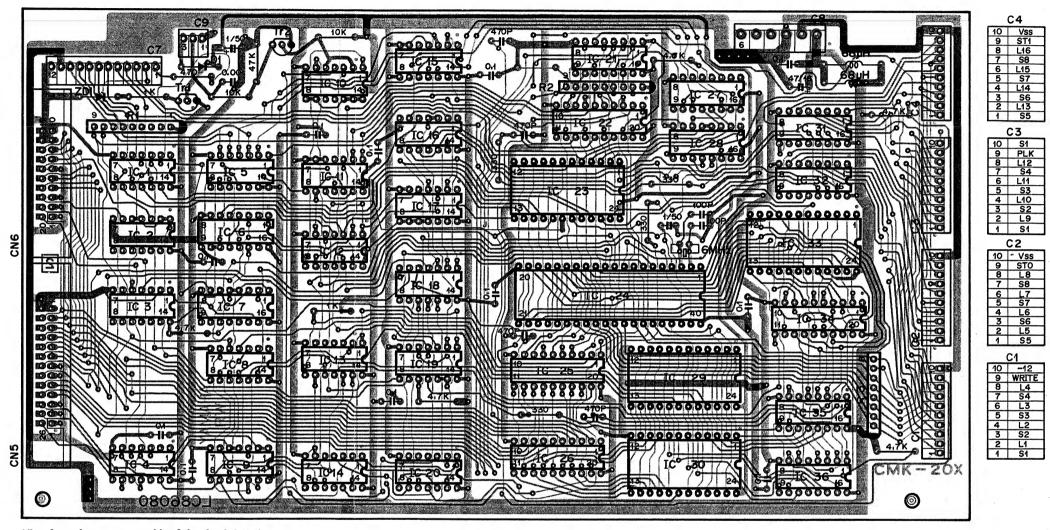
| REV | RE | CR-REV (C1-1) | | MSW | OR | CR-MSW (C1-6) | WPR YE CR-WPR (C1-5)
WEN GR CR-WEN (C1-3)

С9					
Pin No.	Pin Name	Wire Color	Destination		
1	-12	BE	DC12 (C7-1)		
2	PON	GR	DC-PON (C7-3)		
3	-7B	VI	DC7B (C7-5)		

BE DC--12 (C11-1)
PK DC-PON (C11-2) 3 -7B VI DC--7B (C11-3)

3	MSW	OR	CR-MSW (C1-6)	3	-7B	VI	DC	7B (C7-5)
4	WPR	YE	CR-WPR (C1-5)					
5	WEN	GR	CR-WEN (C1-3)	l				
6	WDT	BE	CR-WDT (C1-4)	CN	CN Name		Destination	
7	CLD	VI	CR-CLD (C1-7)	No.				
8	MON	GY	CR-MON (C1-8)	CN5		LAT CA		(to PGM UNIT 24P CONNECTOR
9	RCK	WH	CR-RCK (C1-9)	CN6	20P F	LAT CA	BLE	(to KC-CN1)
10	RDT	GG	CR-RDT (C1-10)	1				
11	-7	GR	CR-+5V (V1-11)	1				
12	-12	BE	CR-GND (C1-12)	1				





View from the component side of the circuit board

(N	otes	١
---	---	------	---

1. Circuit Boa	rd: LC86080 2	IC6	: TC4027BP
2. Transistors		IC7	: TC40161BP
Tr1	: 2SA509 (O, Y)	IC9, 16, 20	: HD74LSO0
Tr2	: 2SC458 (C)	IC10	: TC40HO32F
3. Diodes		IC11	: TC4011BP
D1	: 1N34A	IC14	: HC74LS20P
ZD1	: RD3.6EB1	IC15, 17	: TC4013BP
4. IC		IC19	: HD74LS74A
IC1	: HD7416	IC21	: HD74LS366
IC2, 13	: HD74LSO8P	IC22	: HD74LS240
IC3	: TC4024BP	IC23	: μPD8243
IC4, 8, 18	: HD74LSO4P	IC24	: μPD8035
IC5, 12	: TC4069UBP	IC25, 26	: SN72LS245

IC27 : TC4028BP : HD74LS138P IC28 IC29, 30 : TC5516P IC31, 32 : HD74145

IC33 : MB8516 **IC34** : SN74LS273 IC35, 36 : HD74LS161P

5. Capacitor : Ceramic capacitor marked: Cerarock capacitor CSA6.00

6. Resistor R1, 2, 3 : 4.7K x 8 (Resistor) 7. Connector

C1, 2, 3, 4 : NH Connector 10P (T, E) : NH Connector 12P (T, E) C9 : NH Connector 3P (T, E) CN5 : Header 26P CN6 : Header 20P : 3.96 pitch 6P

NA number	IC29	Jumper wire
GS1 NA80695	0	0
GS2 NA80742		

KEP-NA80695 ♠ KEP-NA80742 ▲

Pin No.	Pin Name	Wire Color	Destination	Pin No.	Pin Name	Wire Color	Destination
1	E	SBES		1	PC3	GR	CNB-PC3 (C7-5
2	E	SVIS		2	PC0	RE	KC-VIB (C1-2)
3	E	SGYS		3	PC2	OR	CNB-PC2 (C7-4
4	BAL2A	SBE	CNP-BAL2A (C1-4)	4	PC1	YE	CNB-PC1 (C7-3
5	BAL2B	S VI	CNP-BAL2B (C1-5)	5	E	BL	EFF-E (C1-4)
6	E	SWHS		-			
7	BAL1A	SGY	CNP-BAL1A (C1-7)				:8
8	BAL1B	SWH	CNP-BAL1B (C1-8)			•	,0

GS1

C1

C2

3 E SYES — 4 MIX SOR CNP-MIX (C2-4)

5 E S GR S —
6 OUT2 S YE CNP-OUT2 (C2-6)
7 OUT1 S GR CNP-OUT1 (C2-7)

СЗ

3 E BL CNX-E (C2-1)

4 LAMP YE CNX-LAMP (C2-2)

5 HPO1 BR CNX-HPO1 (C2-3) 6 HPO2 RE CNX-HPO2 (C2-4)

7 E BL CNX-E (C2-5)

 Pin No.
 Pin Name
 Wire Color
 Destination

 1
 EXP
 BE
 CNB-EXP (C7-2)

3 LIN VI CNB-LIN (C7-1)
4 E - 5 TRMI2 S BR EQ-EQO2 (C2-5)

6 E SBR S
7 TRMII S RE EQ-EQ01 (C2-2)

2 IC OR KC-IC (C1-3)
3 IC GY CNB-IC (C6-5)
4 IC —

Destination

Destination

Pin Pin Wire No. Name Color 1 E — 2 E SORS

Pin Pin Wire No. Name Color

2 E

Pin Pin Wire Color

1 KON YE

Co					
Pin No.	Pin Name	Wire Color	Destination		
1	AI2	SBE	FM2-AO (C3-4)		
2	E	SBES	FM2-E (C3-3)		
3	E	_			
4	E	SGRS	FM1-E (C3-3)		
5	Al1	S GR	FM1-AO (C3-4)		

C9

C7

Pin No.	Pin Name	Wire Color	Destination
1	V1BSP	VI	EFF-VSI (C1-3)
2	V1BPD	GG	CNB-V1B (C6-8)
3	-	_	-
4	V1BDI	GR	EFF-VDO (C1-1)
5	E	_	_
6	- 1	_	_
7	V1BD0	BE	EFF-VDI (C1-2)

Pin No.	Pin Name	Wire Color	Destination
1	V1BSP	VI	EFF-VSI (C1-3)
2	V1BPD	GG	CNB-V1B (C6-8)
3	-	_	-
4	V1BDI	GR	EFF-VDO (C1-1)
5	E	_	-
6	-	_	_
7	V1 BDO	BE	EFF-VDI (C1-2)

Pin No.	Pin Name	Wire Color	Destination
1	-12	BE	CNB12 (C2-1)
2	-15	BR	CNB15 (C2-3)
3	E	_	_
4	E	-	_
5	E	-	
6	E	BL	CNB-E (C2-5)
7	+15	OR	CNB-+15 (C2-7)

Pin No.	Pin Name	Wire Color	Destination		Pin No.	Pin Name	Wire Color	
1	E	SRES	BAL2 OUT-PIN1	1	1	A12	S BE	T
2	E	SORS	BAL2 OUT-PIN1		2	Ε	-	T
3	E	SYES	BAL1 OUT-PIN1		3	E	-	Г
4	BAL2A	SRE	BAL2 OUT-PIN2		4	E	SGRS	
5	BAL2B	SOR	BAL2 OUT-PIN3		5	Al1	SGR	
6	E	SGRS	BAL1 OUT-PIN1					_
7	BAL1A	SYE	BAL1 OUT-PIN2				C	9
8	BAL1B	S GR	BAL1 OUT-PIN3					_
					Pin	Pin	Wire	

СЗ

3 HPO1 BR HP-P1-2 HP-J-R 4 HPO2 RE HP-P1-1 HP-J-L 5 E BL HP-P1-3 HP-J-E

C4

3 LIN VI HP.P1.4 LINE SW Center Terminal
4 E - 5 TRM12 S BR EQ-TRM12 (C2-1)

6 E SBRS
7 TRMII SRE EQ-TRMII (C2-4)

C5

8 E SRES

Pin No.	Pin Name	Wire Color	Destination
1	VIBSP	VI	EFF-VIBSP (C3-3)
2	VIBPD	GG	FC-P1-8 F/S4P-4
3	-	_	-
4	VIBDI	GR	EFF-VIBDI (C3-5)
5	E	_	_
6	-	_	_
7	VIBDO	BE	EFF-VIBDO (C3-4

C10

Destinatio S BE FM-AO (C3-5)

S GR S FM-E (C3-2) S GR FM-AO (C3-4)

Pin No.	Pin Name	Wire Color	Destination
1	-12	BE	DC12 (C3-3)
2	-15	BR	DC 15 (C3-4)
3	E	-	_
4	E	-	_
5	Ε	_	_
6	E	BL	DC-E (C3-5)
7	+15	OR	DC-+15 (C3-6)

		Ĭ	-
Pin No.	Pin Name	Wire Color	Destination
1	_	_	-
2	IC	OR	KC-IC (C1-3)
3	IC	-	-
4	IC	-	-
5	E	I -	_
6	EO1	SOR	EQ-E01 (C1-4)
7	E	SORS	
8	ENSS	GR	SELL-ENSS (C1-4)
9	E	SYES	
10	EO2	SYE	EQ-E02 (C1-5)

Pin No.	Pin Name	Wire Color	Destination					
1	TRMDO	RE	EFF-TRMDO (C4-4)					
2	TRMSI	OR	EFF-TRMSI (C4-3)					
3	-	-	_					
4	E	-	-					
5	TRMSO	YE	EFF-TRMSO (C4-2)					
6	TRMPD	GR	FC-P1-7 F/S4P-3					
7	TRMSW	BE	SELL-TRMSW (C1-1)					
8	TRMDI	BR	EFF-TRMDI (C4-5)					

		C	57	
in lo.	Pin Name	Wire Color	Destination	1
1	PC3	GR	EFF-PC3 (C1-2)	1
2	PC0	RE	KC-VIB (C1-2)	1
3	PC2	OR	EFF-PC2 (C1-3)	1
4	PC1	YE	EFF-PC1 (C1-4)	1
5	Ε	BL	EFF-E (C1-1)	1

(Notes)
1. Circuit B
2. Transisto

 $Tr1 \sim 3$, Tr4, 5, 9 Tr6, 13, Tr7, 11, Tr12 Tr20

Tr21 3. FET FET1∼ 4. IC

IC1

IC2 ~ 4 $1C5 \sim 7$ IC8 ~ 13 IC14 IC18, 19

5. Diodes $D1 \sim 12$

6. Zener Di ZD1

7. Connecto C1, 4, 6 C2, 9, 10 C3, 7, 8

0 22/16 - 4 - BP 0 33K 100K 2 VR6 3 вэок 22/16 -B--BP -47K -1 IC19 2 VR7 IC19 7 1 K - Q VR2 VR5 30 B20K 15K 222K 220/1 2:2K 220/16 4.7 K 100K 680K 10 K 22 K 6.8K 0.0022 47K 11- IC181 27K 7 47K 7 V1BD0 6 -5 E 4 VIBDI 0000000 82K O1 VR1 2 B10K ic 1 YAMAHA [Z]

View from the component side of the circuit board

9 E SYES --10 EO2 SYE EQ-EQI2 (C1-1) C6 Pin Pin Wire No. Name Color Destination 1 TRMDO RE EFF-TDI (C2-2)
2 TRMSI OR EFF-TRO (C2-3)

8 TRMDI BR EFF-TDO (C2-1)

57

58

A Circuit Board & Wiring

ISI AHAMAY

GS1

Pin No.	Pin Name	Wire Color	Destination
1	Ε	SBES	
2	Ε	SVIS	
3	Ε	SGYS	
4	BAL2A	SBE	CNP-BAL2A (C1-4)
5	BAL2B	S VI	CNP-BAL2B (C1-5)
6	Ε	SWHS	
7	BAL1A	SGY	CNP-BAL1A (C1-7)
8	BAL1B	S WH	CNP-BAL1B (C1-8)

C2

C3

3 E BL CNX-E (C2-1)
4 LAMP YE CNX-LAMP (C2-2)
5 HPO1 BR CNX-HPO1 (C2-3)
6 HPO2 RE CNX-HPO2 (C2-4)

7 E BL CNX-E (C2-5)

| Pin | No. | Name | Color | Destination | | 1 | EXP | BE | CNB-EXP (C7-2) | |

2 E - -3 LIN VI CNB-LIN (C7-1) 6 E SBRS
7 TRMI1 SRE EQ-EQ01 (C2-2)
8 E SRES

6 E01 S OR E0-E0I1 (C1-2)
7 E S OR S —
8 ENSS GR TET-ENS (C1-4)
9 E S Y ES — 9 E S YES — 10 EO2 S YE EQ-EQI2 (C1-1)

C6 2 TRMSI OR EFF-TRO (C2-3)

Destination

Pin Pin Wire No. Name Color

Pin No.	Pin Name	Wire Color	Destination
1	PC3	GR	CNB-PC3 (C7-5)
2	PC0	RE	KC-VIB (C1-2)
3	PC2	OR	CNB-PC2 (C7-4)
4	PC1	YE	CNB-PC1 (C7-3)
5	Ε	BL	EFF-E (C1-4)

Pin No.	Pin Name	Wire Color	Destination
1	PC3	GR	CNB-PC3 (C7-5)
2	PC0	RE	KC-VIB (C1-2)
3	PC2	OR	CNB-PC2 (C7-4)
4	PC1	YE	CNB-PC1 (C7-3)
5	E	BL	EFF-E (C1-4)

C7

Pin No.	Pin Name	Wire Color	Destination
1	Ε	SRES	BAL2 OUT-PIN1
2	Ε	SORS	BAL2 OUT-PIN1
3	Ε	SYES	BAL1 OUT-PIN1
4	BAL2A	SRE	BAL2 OUT-PIN2
5	BAL2B	SOR	BAL2 OUT-PIN3
6	E	SGRS	BAL1 OUT-PIN1
7	BAL1A	SYE	BAL1 OUT-PIN2
8	BAL1B	SGR	BAL1 OUT-PING

No.	Name	Color	Destination
1	AI2	S BE	FM-AO (C3-5)
2	Ε	-	_
3	Ε	-	
4	E	SGRS	FM-E (C3-2)
5	AI1	S GR	FM-AO (C3-4)

	BAL1B	SGR	BAL1 OUT-PIN3					
			23		Pin No.	Pin Name	Wire Color	Destination
		,	,3		1	VIBSP	VI	EFF-VIBSP (C3-3)
in	Pin	Wire	T	1	2	VIBPD	GG	FC-P1-8 F/S4P-4
ю.	Name	Color	Destination		3	-	_	_
1	E	BL	MKL-EP	1	4	VIBDI	GR	EFF-VIBDI (C3-5)
2	LAMP	YE	FC-P1-3 F/C-J-pin2	1	5	E	_	-
3	HPO1	BR	HP-P1-2 HP-J-R	1	6	_	-	-
4	HPO2	RE	HP-P1-1 HP-J-L	1	7	VIBDO	BE	EFF-VIBDO (C3-4)
5	E	BL	HP-P1-3 HP-J-E				C	10
		_						

GS2

6	-	-	- 1
7	VIBDO	BE	EFF-VIBDO (C3-4)
		С	10
Pin No.	Pin Name	Wire Color	Destination
1	-12	BE	DC12 (C3-3)
2	-15	BR	DC15 (C3-4)
3	E	-	-
4	E	_	-
5	E	-	-
6	E	BL	DC-E (C3-5)
7	+15	OR	DC-+15 (C3-6)

					5	E	BL	HP-P1-3 HP-J-E
Pin No.	Pin Name	Wire Color	Destination				C	4
1	V1BSP	VI	EFF-VSI (C1-3)				•	•
2	V1BPD	GG	CNB-V1B (C6-8)	P	Pin	Pin	Wire	Destination .
3	-	-	_	N	Vo.	Name	Color	Destination
4	V1BDI	GR	EFF-VDO (C1-1)		1	EXP	BE	FC-P1-1 F/C-J-pin4
5	E	-	_		2	E	BL	FC-P1-2 F/C-J-pin3,8
6	_	_	-		3	LIN	VI	HP-P1-4 LINE SW Center Terminal
7	V1BD0	BE	EFF-VDI (C1-2)	i i	4	E	-	-
			· · · · · · · · · · · · · · · · · · ·	' T	5	TRMI2	SBR	EQ-TRMI2 (C2-1)
		C	10		6	E	SBRS	
					7	TRMI1	SRE	EQ-TRMI1 (C2-4)
Pin No.	Pin Name	Wire Color	Destination		8	E	SRES	
1	-12	BE	CNB12 (C2-1)				C	:5
2	-15	BR	CNB15 (C2-3)				_	
3	E	_	-	[F	Pin	Pin	Wire	Destination
4	E	_	_	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	No.	Name	Color	Destination
5	E	_	_		1	-	_	-
6	E	BL	CNB-E (C2-5)		2	IC	OR	KC-IC (C1-3)
7	+15	OR	CNB-+15 (C2-7)		3	IC	_	_
				1-			1	

Pin	Pin	Wire	Destination
No.	Name	Color	
1	-	-	-
2	IC	OR	KC-IC (C1-3)
3	IC	-	_
4	IC	_	-
5	E	-	_
6	EO1	SOR	EQ-E01 (C1-4)
7	Ε	SORS	
8	ENSS	GR	SELL-ENSS (C1-4)
9	E	SYES	,
10	EO2	SYE	EQ-E02 (C1-5)

C6								
Pin No.	Pin Name	Wire Color	Destination					
1	TRMDO	RE	EFF-TRMDO (C4-4					
2	TRMSI	OR	EFF-TRMSI (C4-3)					
3	-	_	-					
4	E	_	-					
5	TRMSO	YE	EFF-TRMSO (C4-2)					
6	TRMPD	GR	FC-P1-7 F/S4P-3					
7	TRMSW	BE	SELL-TRMSW (C1-1)					
8	TRMDI	BR	EFF-TRMDI (C4-5)					

7	TRMSW	BE	SELL-TRMSW (C1-1)					
8	TRMDI	BR	EFF-TRMDI (C4-5)					
	C7							
Pin No.	Pin Name	Wire Color	Destination					
1	PC3	GR	EFF-PC3 (C1-2)					
2	PC0	RE	KC-VIB (C1-2)					
3	PC2	OR	EFF-PC2 (C1-3)					
4	PC1	YE	EFF-PC1 (C1-4)					
5	Ε	BL	EFF-E (C1-1)					

/N	otes)	
	Circuit Board	· I C96000 [2]
	Transistors	. LC80090 🗷
۷.	Tr1 ~ 3, 22, 23	. 25C4E8LC (C)
	Tr4, 5, 9, 15, 18, 19 Tr6, 13, 16	
	•	: 2SC509 (O, Y)
	Tr7, 11, 14, 17 Tr12	
		: 2SA1015 (O, Y)
	Tr20	: 2SC1212A (B, C)
2	FET	: 2SA743A (B, C)
٥.		- DCK105 (5)
4	FET1 ~ 4 IC	: 2SK105 (F)
4.		\/M000
	IC1	: YM633
		: iG03290
		: MN3009
	$1C8 \sim 13, 15 \sim 17$	
		: TC4016
	IC18, 19	: iG02600
5.	Diodes	
	D1 ~ 12, 14, 15	: 1S1555
6.	Zener Diodes	
	ZD1	: WZ050
7.	Connector	
	C1, 4, 6	: NH Connector 8P (T, E)
	C2, 9, 10	: NH Connector 7P (T, E)

: NH Connector 5P (T, E)

: NH Connector 10P (T, E)

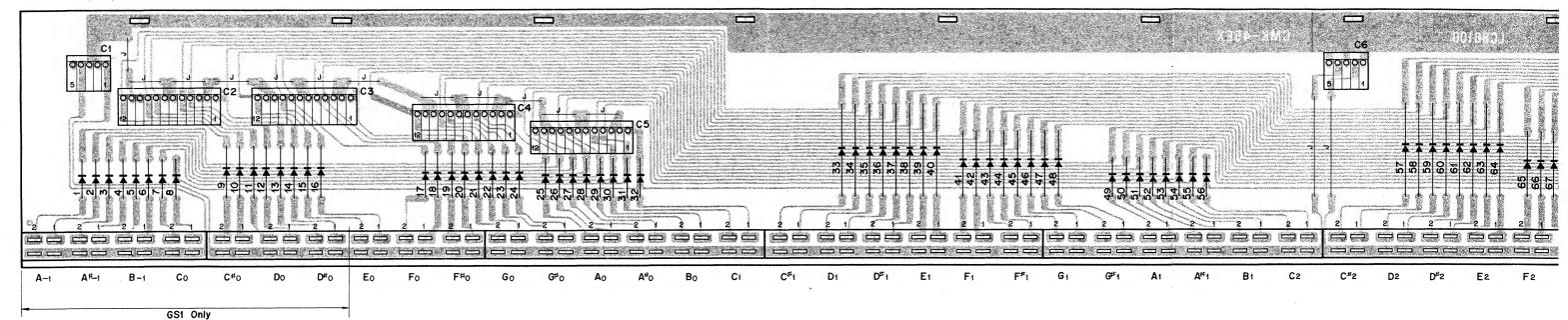
C3, 7, 8

C5

۷.	PCU				
1	PC3				
	С9				
7	V1BD0				
6	-				
6 5 4	E				
4	VIBDI				
3	-				
2	VIBPD				
1	VIBSP				

MK

View from the component side of the circuit board



GS1

Pin No.	Pin Name	Wire Color	Destination
1	L1	s vI	KC-L1 (C4-7)
2	Vss	SVIS	
3	Vss	SGYS	
4	LO	SGY	KC-LO (C4-8)

		C	2
Pin No.	Pin Name	Wire Color	Destination
1	D#1	SBE	KC-D # 1 (C5-6)
2	Vss	SBES	
3	Vss	SGRS	
4	D#2	SGR	KC-D # 2 (C5-5)
5	D1	SYE	KC-D1 (C5-4)
6	Vss	SYES	
7	Vss	SORS	
8	D2	SOR	KC-D2 (C5-3)
9	C#1	SRE	KC-C # 1 (C5-2)
10	Vss	SRE \$	
11	Vss	SBR S	
12	C#2	SBR	KC-C # 2 (C5-1)

֡	Pin Name	Wire Color	Destination		Pin No.	Pin Name	
	D#1	SBE	KC-D # 1 (C5-6)	7 [1	F#1	ľ
	Vss	SBES		7 1	2	Vss	r
	Vss	SGRS		7 [3	Vss	ľ
	D#2	S GR	KC-D # 2 (C5-5)	7 1	4	F#2	Ī
	D1	SYE	KC-D1 (C5-4)] [5	F1	ľ
	Vss	SYES			6	Vss	Γ
	Vss	SORS		7 [7	Vss	
	D2	SOR	KC-D2 (C5-3)	7 [8	F2	Γ
	C#1	SRE	KC-C # 1 (C5-2)	7 [9	E1	
	Vss	SRES		7 [10	Vss	
	Vss	SBR S		7 [11	Vss	Ī
	C#2	SBR	KC-C # 2 (C5-1)	7	12	E2	Γ
						,	_

Pin No.	Pin Name	Wire Color	Destination
1	F#1	SPK	KC-F # 1 (C5-12)
2	Vss	SPKS	
3	Vss	S SB S	
4	F#2	S SB	KC-F# 2 (C5-11)
5	F1	SGG	KC-F1 (C5-10)
6	Vss	S GG S	
7	Vss	S WH S	
8	F2	SWH	KC-F2 (C5-9)
9	E1	SGY	KC-E1 (C5-8)
10	Vss	SGYS	
11	Vss	SVIS	
12	E2	s vI	KC-E2 (C5-7)

Pin No.	Pin Name	Wire Color	Destination
1	A1	SBE	KC-A1 (C6-6)
2	Vss	SBES	
3	Vss	SGRS	
4	A7	S GR	KC-A2 (C6-5)
5	G#1	SYE	KC-G # 1 (C6-4)
6	Vss	SYES	
7	Vss	SORS	
8	G#2	SOR	KC-G # 2 (C6-3)
9	G1	SRE	KC-G1 (C6-2)
10	Vss	SRES	
11	Vss	SBRS	
12	G2	SBR	KC-G2 (C6-1)

Pin No.	Pin Name	Wire Color	Destination
1	C1	SPK	KC-C1 (C6-12)
2	Vss	SPKS	
3	Vss	S SB S	
4	C2	S SB	KC-C2 (C6-11)
5	B1	S GG	KC-B1 (C6-10)
6	Vss	SGGS	
7	Vss	SWHS	
8	B2	SWH	KC-B2 (C6-9)
9	A#1	SGY	KC-A # 1 (C6-8)
10	Vss	SGYS	
11	Vss	SVIS	
12	A#2	s vI	KC-A # 2 (C6-7)

stination	Pin No.	Pin Name	Wire Color	Destination	
(C6-12)	1	Vss	-	_	
	2	L3	SGR	KC-L3 (C4-5)	
	3	Vss	SGRS		
2 (C6-11)	4	L2	SBE	KC-L2 (C4-6)	
(C6-10)	5	Vss	SBES		
2 (C6-9)					

Pin No.	Pin Name	Wire Color	Destination
1	C1	BR	MK2-C1 (C3-1)
2	C2	RE	MK2-C2 (C3-2)
3	B1	OR	MK2-B1 (C3-3)
4	B2	YE	MK2-B2 (C3-4)
5	A#1	GR	MK2-A # 1 (C3-5)
6	A#2	BE	MK2-A # 2 (C3-6)
7	A1	VI	MK2-A1 (C3-7)
8	A2	GY	MK2-A2 (C3-8)
9	G#1	WH	MK2-G # 1 (C3-9)
10	G#2	GG	MK2-G #2 (C3-10)
11	G1	SB	MK2-G1 (C3-11)
12	G2	PK	MK2-G2 (C3-12)

Pin No.	Pin Name	Wire Color	Destination
1	F#1	BR	MK2-F # 1 (C1-1
2	F#2	RE	MK2-F# 2 (C1-2
3	F1	OR	MK2-F1 (C1-3)
4	F2	YE	MK2-F2 (C1-4)
5	E1	GR	MK2-E1 (C1-5)
6	E2	BE	MK2-E2 (C1-6)
7	D#1	VI	MK2-D #1 (C1-7
8	D#2	GY	MK2-D # 2 (C1-8
9	D1	WH	MK2-D1 (C1-9)
10	D2	GG	MK2-D2 (C1-10)

tion	Pin No.	Pin Name	Wire Color	Destination
(C1-1)	1	C#1	SB	MK2-C #1 (C2-1)
(C1-2)	2	C#2	PK	MK2-C # 2 (C2-2)
1-3)	3	Vss	BL	MK2-Vss (C2-3)
1-4)	4	Vss	BL	MK2-Vss (C2-4)
1-5)	5	Vss	BL	DC-Vss (C1-2)
1-6)				
(C1-7)				
(C1-8)				
1-9)				

(Notes)

1. Circuit Board : LC86100 0

2. Diodes

D1 ~ 80 : 1S1555

3. Connector

C1, 6, 9 : 5P (T, E) $C2 \sim 5, 7$: 12P (T, E) C8 : 10P (T, E)

KEP-NA80697-04 △

GS2

Pin No.	Pin Name	Wire Color	Destination				
1	L1	s vi	KC-L1 (C4-7)				
2	Vss	SVIS					
3	Vss	-	_				
4	LO	_	_				
5	_	_	-				

Pin No.	Pin Name	Wire Color	Destination	Pin No.	Pin Name	Co
1	D#1	SBE	KC-D#1 (C5-6)	1	F#1	SP
2	Vss	SBES		2	Vss	SP
3	Vss	S GR S		3	Vss	SS
4	D#2	S GR	KC-D #2 (C5-5)	4	F#2	SS
5	D1	SYE	KC-D1 (C5-4)	5	F1	SG
6	Vss	SYES		6	Vss	SC
7	Vss	SORS		7	Vss	SV
8	D2	SOR	KC-D2 (C5-3)	8	F2	SV
9	C#1	SRE	KC-C #1 (C5-2)	9	E1	SC
10	Vss	SRES		10	Vss	SC
11	Vss	SBRS		11	Vss	SV
12	C#2	SBR	KC-C#2 (C5-1)	12	E2	SV

Pin No.	Pin Name	Wire Color	D
1	F#1	SPK	KC-F
2	Vss	SPKS	
3	Vss	SSBS	
4	F#2	S SB	KC-F
5	F1	S GG	KC-F
6	Vss	S GG S	
7	Vss	SWHS	
8	F2	SWH	KC-F
9	E1	S GY	KC-E
10	Vss	SGYS	
11	Vss	S VI S	
12	F2	S VI	KC-E

Vire olor	Destination	Pin No.		Wire Color	Destination
PK	KC-F#1 (C5-12)	1	A1	SBE	KC-A1 (C6-6)
PK S		2	Vss	SBES	
SBS		3	Vss	SGRS	
SB	KC-F#2 (C5-11)	4	A2	S GR	KC-A2 (C6-5)
GG	KC-F1 (C5-10)	5	G#1	SYE	KC-G#1 (C6-4)
GG S		6	Vss	SYES	
WH S		7	Vss	SORS	
WH	KC-F2 (C5-9)	8	G#2	SOR	KC-G#2 (C6-3)
GY	KC-E1 (C5-8)	9	G1	SRE	KC-G1 (C6-2)
GY S		10	Vss	SRES	
VI S		11	Vss	SBRS	
VI	KC-E2 (C5-7)	12	G2	SBR	KC-G2 (C6-1)
	L	,			

Pin No.	Pin Name	Wire Color	Destination
1	C1	SPK	KC-C1 (C6-12)
2	Vss	SPKS	
3	Vss	SSBS	
4	C2	S SB	KC-C2 (C6-11)
5	B1	S GG	KC-B1 (C6-10)
6	Vss	S GG S	
7	Vss	SWHS	
8	B2	S WH	KC-B2 (C6-9)
9	A#1	SGY	KC-A#1 (C6-8)
10	Vss	SGYS	
11	Vss	SVIS	
12	A#2	S VI	KC-A#2 (C6-7)

		Pin No.	Pin Name	Wire Color	
		1	Vss	-	
		2	L3	S GR	K
		3	Vss	SGRS	_
		4	L2	SBE	K
		5	Vss	SBES	Г
	Ι΄				
_					

estination	Pin No.	Pin Name	Wire Color	Destination
-	1	C1	BR	MK3-C1 (C3-1)
3 (C4-5)	2	C2	RE	MK3-C2 (C3-2)
	3	B1	OR	MK3-B1 (C3-3)
2 (C4-6)	4	B2	YE	MK3-B2 (C3-4)
	5	A#1	GR	MK3-A#1 (C3-5)
	6	A#2	BE	MK3-A#2 (C3-6)
	7	A1	VI	MK3-A1 (C3-7)
	8	A2	GY	MK3-A2 (C3-8)
	9	G#1	WH	MK3-G #1 (C3-9)
	10	G#2	GG	MK3-G#2 (C3-10
	11	G1	SB	MK3-G1 (C3-11)
	12	G2	PK	MK3-G2 (C3-12)

Pin No.	Pin Name	Wire Color	Destination
1	F#1	BR	MK3-F#1 (C1-1)
2	F = 2	RE	MK3-F #2 (C1-2)
3	F1	OR	MK3-F1 (C1-3)
4	F2	YE	MK3-F2 (C1-4)
5	E1	GR	MK3-E1 (C1-5)
6	E2	BE	MK3-E2 (C1-6)
7	D#1	VI	MK3-D#1 (C1-7)
8	D#2	GY	MK3-D#2 (C1-8)
9	D1	WH	MK3-D1 (C1-9)
10	D2	GG	MK3-D2 (C1-10)

Pin No.	Pin Name	Wire Color	Destination
1	C#1	SB	MK3-C#1 (C2-1)
2	C#2	. PK	MK3-C#2 (C2-2)
3	Vss	BL	MK3-Vss (C2-3)
4	Vss	· BL	MK3-Vss (C2-4)
5	Vss	BL	DC-Vss (C2-2)

(Notes)

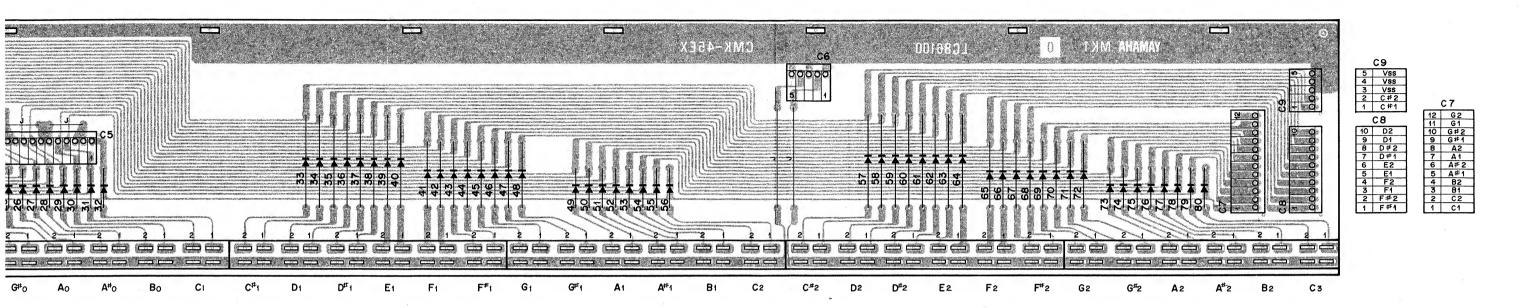
1. Circuit Board: LC86100 0

2. Diodes

D65 ~ 80 : 1S1555

KEP-NA80741-07

MK1(GS1), MK4(GS2) Circuit Board & Wiring



Pin No.	Pin Name	Wire Color	Destination
1	C1	SPK	KC-C1 (C6-12)
2	Vss	SPKS	
3	Vss	S SB S	
4	C2	S SB	KC-C2 (C6-11)
5	B1	S GG	KC-B1 (C6-10)
6	Vss	SGGS	
7	Vss	SWHS	
8	B2	SWH	KC-B2 (C6-9)
9	A#1	SGY	KC-A # 1 (C6-8)
10	Vss	SGYS	
11	Vss	SVIS	
12	A#2	SVI	KC-A # 2 (C6-7)

Pin No.	Pin Name	Wire Color	Destination
1	Vss	-	_
2	L3	SGR	KC-L3 (C4-5)
3	Vss	SGRS	
4	L2	SBE	KC-L2 (C4-6)
5	Vss	SBES	

stination	Pin No.	Pin Name	Wire Color	Destination
-	1	C1	BR	MK2-C1 (C3-1)
(C4-5)	2	C2	RE	MK2-C2 (C3-2)
	. 3	B1	OR	MK2-B1 (C3-3)
(C4-6)	4	B2	YE	MK2-B2 (C3-4)
	5	A#1	GR	MK2-A # 1 (C3-5)
	6	A#2	BE	MK2-A # 2 (C3-6)
	7	A1	VI	MK2-A1 (C3-7)
	8	A2	GY	MK2-A2 (C3-8)
	9	G#1	WH	MK2-G # 1 (C3-9)
	10	G#2	GG	MK2-G #2 (C3-10)
	11	G1	SB	MK2-G1 (C3-11)
	12	G2	PK	MK2-G2 (C3-12)

C7

Pin lame	Wire Color	Destination		Pin No.	Pin Name	Wire Color	Destination
C1	BR	MK2-C1 (C3-1)		1	F#1	BR	MK2-F # 1 (C1-1
C2	RE	MK2-C2 (C3-2)		2	F#2	RE	MK2-F# 2 (C1-2
B1	OR	MK2-B1 (C3-3)		3	F1	OR	MK2-F1 (C1-3)
B2	YE	MK2-B2 (C3-4)		4	F2	YE	MK2-F2 (C1-4)
# 1	GR	MK2-A#1 (C3-5)		5	E1	GR	MK2-E1 (C1-5)
# 2	BE	MK2-A # 2 (C3-6)		6	E2	BE	MK2-E2 (C1-6)
A1	VI	MK2-A1 (C3-7)		7	D#1	VI	MK2-D #1 (C1-7
A2	GY	MK2-A2 (C3-8)		8	D#2	GY	MK2-D#2 (C1-8
# 1	WH	MK2-G # 1 (C3-9)		9	D1	WH	MK2-D1 (C1-9)
# 2	GG	MK2-G #2 (C3-10)		10	D2	GG	MK2-D2 (C1-10)
C1	CD	MK2 G1 (C2 11)	ı	-			····

Pin No.	Pin Name	Wire Color	Destination
1	C # 1	SB	MK2-C #1 (C2-1)
2	C#2	PK	MK2-C # 2 (C2-2)
3	Vss	BL	MK2-Vss (C2-3)
4	Vss	BL	MK2-Vss (C2-4)
5	Vss	BL	DC-Vss (C1-2)

			J
Pin No.	Pin Name	Wire	Destination
1	C1	SPK	KC-C1 (C6-12)
2	Vss	SPKS	
3	Vss	S SB S	
4	C2	S SB	KC-C2 (C6-11)
5	B1	S GG	KC-B1 (C6-10)
6	Vss	SGGS	
7	Vss	SWHS	
8	B2	S WH	KC-B2 (C6-9)
9	A#1	SGY	KC-A#1 (C6-8)
10	Vss	SGYS	
11	Vss	SVIS	
	0 40	0.145	KO 4 # 0 (00 7

in lo.	Pin Name	Wire Color	Destination	Pin No.	Pin Name	Wire Color	Destination
1	Vss	_	-	1	C1	BR	MK3-C1 (C3-1)
2	L3	S GR	KC-L3 (C4-5)	2	C2	RE	MK3-C2 (C3-2)
3	Vss	SGRS		3	B1	OR	MK3-B1 (C3-3)
4	L2	SBE	KC-L2 (C4-6)	4	B2	YE	MK3-B2 (C3-4)
5	Vss	SBES		5	A#1	GR	MK3-A#1 (C3-5)
				6	A # 2	BE	MK3-A#2 (C3-6)
				7	A1	VI	MK3-A1 (C3-7)
				8	A2	GY	MK3-A2 (C3-8)
				.9	G#1	WH	MK3-G #1 (C3-9)
				10	G#2	GG	MK3-G#2 (C3-10)
				11	G1	SB	MK3-G1 (C3-11)
				12	G2	PK	MK3-G2 (C3-12)

Pin No.	Pin Name	Wire Color	Destination
1	F#1	BR	MK3-F#1 (C1-1)
2	F#2	RE	MK3-F #2 (C1-2)
3	F1	OR	MK3-F1 (C1-3)
4	F2	YE	MK3-F2 (C1-4)
5	E1	GR	MK3-E1 (C1-5)
6	E2	BE	MK3-E2 (C1-6)
7	D#1	VI	MK3-D#1 (C1-7)
8	D#2	GY	MK3-D#2 (C1-8)
9	D1	WH	MK3-D1 (C1-9)
10	D2	GG	MK3-D2 (C1-10)

Pin No.	Pin Name	Wire Color	Destination
1	C#1	SB	MK3-C#1 (C2-1)
2	C#2	PK	MK3-C#2 (C2-2)
3	Vss	BL	MK3-Vss (C2-3)
4	Vss	BL	MK3-Vss (C2-4)
5	Vss	BL	DC-Vss (C2-2)

(Notes)

1. Circuit Board: LC86100 © 2. Diodes

D1~80 : 1S1555

3. Connector

C1, 6, 9 : 5P (T, E) C2 ~ 5, 7 : 12P (T, E) C8 : 10P (T, E)

KEP-NA80697-04 ₼

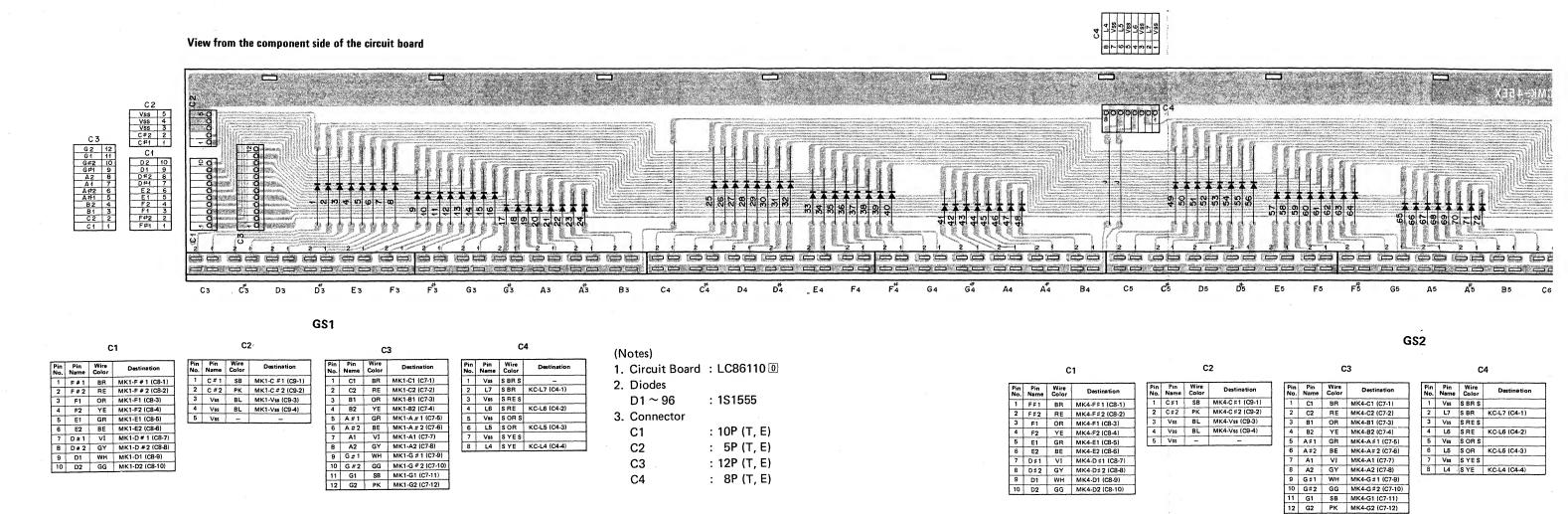
(Notes)

1. Circuit Board : LC86100 0

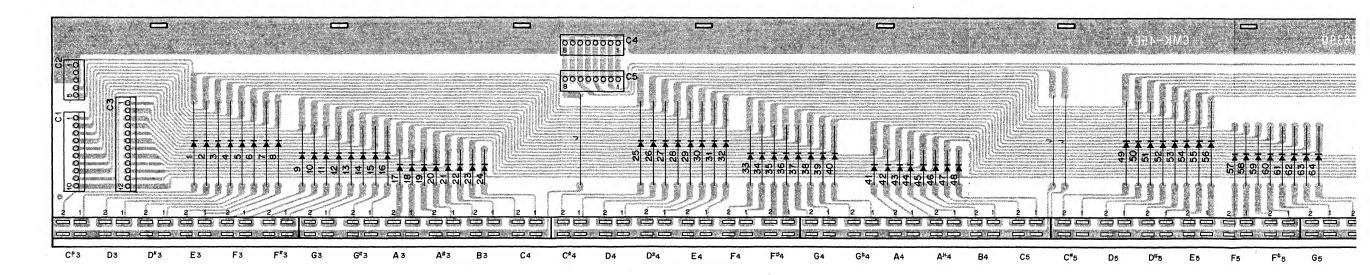
2. Diodes

D65 ~ 80 : 1S1555

KEP-NA80741-07

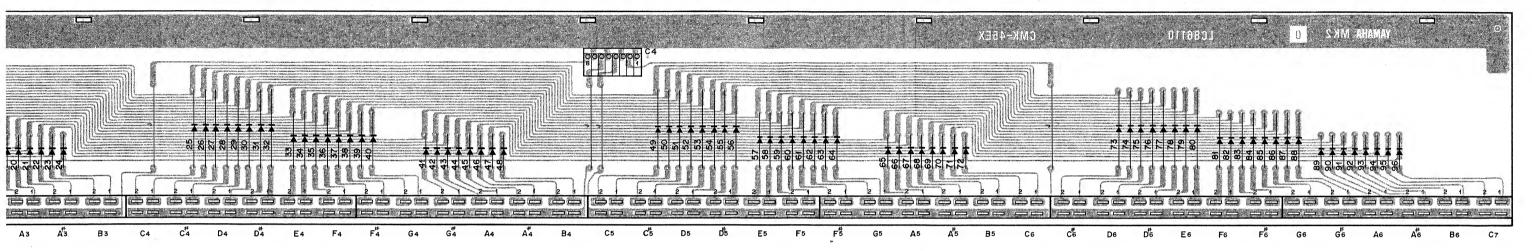


View from the component side of the circuit board



MK2(GS1), MK3(GS2) Circuit Board & Wiring





KC-L7 (C4-1) KC-L6 (C4-2) KC-L5 (C4-3)

KC-L4 (C4-4)

(Notes) 1. Circuit Board : LC86110 0

2. Diodes D1 ~ 96 : 1S1555

3. Connector

: 10P (T, E) C1 : 5P (T, E) C2 : 12P (T, E) C3 C4 : 8P (T, E) RE MK4-F#2 (C8-2)

F#1 BR MK4-F#1 (C8-1) F1 OR MK4-F1 (C8-3) 4 F2 YE MK4-F2 (C8-4) 5 E1 GR MK4-E1 (C8-5) 6 E2 BE MK4-E2 (C8-6) 7 D#1 VI MK4-D#1 (C8-7) 8 D#2 GY MK4-D#2 (C8-8) 9 D1 WH MK4-D1 (C8-9) 10 D2 GG MK4-D2 (C8-10)

C1

1 C#1 SB MK4-C#1 (C9-1)
2 C#2 PK MK4-C#2 (C9-2) 3 Vss BL MK4-Vss (C9-3)
4 Vss BL MK4-Vss (C9-4)

C1 BR MK4-C1 (C7-1) C2 RE MK4-C2 (C7-2) 4 B2 YE MK4-B2 (C7-4) 5 A#1 GR MK4-A#1 (C7-5) 5 A#1 GH MK4-A#2 (C7-6)
6 A#2 BE MK4-A#2 (C7-6)
7 A1 VI MK4-A1 (C7-7)
8 A2 GY MK4-A2 (C7-8)
9 G#1 WH MK4-G#1 (C7-9) 10 G#2 GG MK4-G#2 (C7-10) 11 G1 SB MK4-G1 (C7-11) 12 G2 PK MK4-G2 (C7-12)

СЗ

GS2

C4

2 L7 S BR KC-L7 (C4-1)

4 L6 S RE KC-L6 (C4-2)
5 Vss S OR S

6 L5 S OR KC-L5 (C4-3)
7 Vss S YE S
8 L4 S YE KC-L4 (C4-4)

Destination TEST POINT TEST POINT 4 L6 TEST POINT TEST POINT 5 Vss TEST POINT 6 L5

Destination TEST POINT

TEST POINT

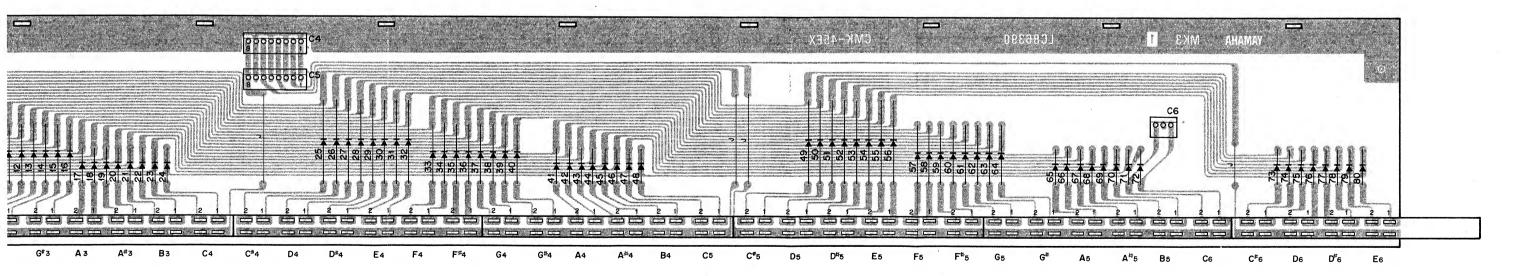
2. Diodes D1 ~ 80 : 1S1555 3. NH Connector C1 : 10P (T, E)

(Notes)

C2 : 5P (T, E) C3 : 12P (T, E) C4 : 8P (T, E)

1. Circuit Board : LC86390 II

KEP-NA80738 △



PCA7

C1

1 C # RE MPX-C#7 (C8-12)
2 D OR MPX-D7 (C8-11)
3 D# YE MPX-D#7 (C8-10)
4 E GR MPX-E7 (C8-9)
5 F BE MPX-F7 (C8-9)
6 F# VI MPX-F#7 (C8-7)
7 G GY MPX-G7 (C8-6)

2 -15 - -3 E BL PCA6-E (C2-4)

4 E - -5 +15 OR PCA6+15 (C2-6)

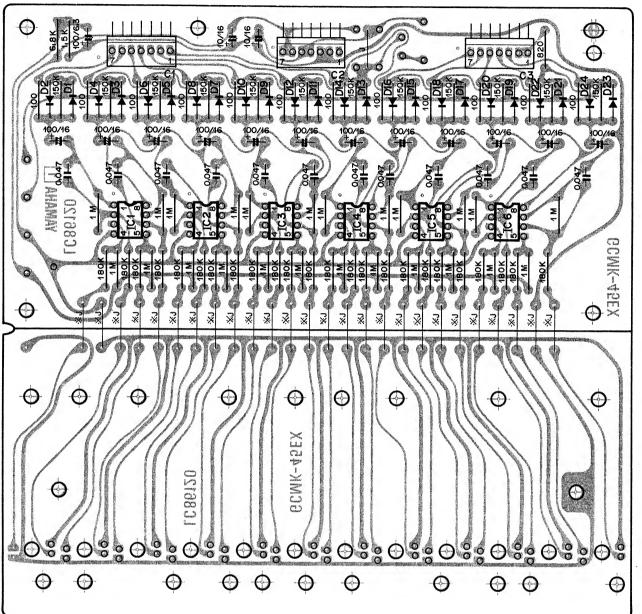
2 A GG MPX-A7 (C8-4)
3 A# SB MPX-A 7 (C8-3)
4 B PK MPX-B7 (C8-2)
5 C BR MPX-C8 (C8-1)

6 IC GY PCA6-IC (C3-7)

7 IC -

6 +15 - -

View from the component side of the circuit board



(Notes)

1. Circuit Board : LC86120 1

2. IC

IC1 ~ 6 : NJM4558DN

3. Diodes

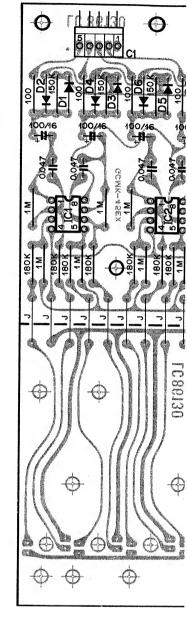
D1 ~ 24 : 1S1555 (1S2473)

KEP-NA80699 △

PCA1 PCA3 PCA5 C1 C1 C1 Pin Pin Wire Destination Destination 1 C # RE MPX-G1 (C2-12)
2 D OB MPX-D1 (C2-11) 1 C# RE MPX-C# 3 (C4-12) D OR MPX-D1 (C2-11) 2 D OR MPX-D3 (C4-11) 2 D OR MPX-D5 (C6-11) 3 D# YE MPX-D#1 (C2-10) 4 E GR MPX-E1 (C2-9) 3 D# YE MPX-D#3 (C4-10)
4 E GR MPX-E3 (C4-9)
5 F BE MPX-F3 (C4-9)
6 F# VI MPX-F#3 (C4-7)
7 G GY MPX-G3 (C4-6) 3 D# YE MPX-D#5 (C6-10) 4 E GR MPX-E5 (C6-9)
5 F BE MPX-F5 (C6-8)
6 F# VI MPX-F # 5 (C6-7) 5 F BE MPX-F1 (C2-8)
6 F# VI MPX-F# 1 (C2-7)
7 G GY MPX-G1 (C2-6) 7 G GY MPX-G5 (C6-6) | Pin | Pin | Wire | Destination | | 1 | -15 | BR | PCA4--15 (C2-2) | Destination 1 -15 BR PCA2--15 (C2-2) 2 -15 BR CNB--15 (C4-3)
2 -15 BR PCA2--15 (C2-1)
3 E BL CNB-E (C4-5) 2 -15 BR PCA2--15 (C2-2)
2 -15 BR PCA4--15 (C2-1)
3 E BL PCA2-E (C2-4) 2 -15 BR PCA6--15 (C2-1) 3 E BL PCA4-E (C2-4) 3 E BL PLASE (LLS-1)
4 E BL PCA4-E (C2-3)
5 +15 OR PCA2-+15 (C2-6)
6 +15 OR PCA4-+15 (C2-6)
7 - - -3 E BL PCA4-E (C24) 4 E BL PCA6-E (C2-3) 5 +15 OR PCA4-+15 (C2-6) 6 +15 OR PCA6-+15 (C2-5) 7 4 E BL PCA2-E (C2-3) 5 +15 RE CNB-15S (C4-7)
6 +15 RE PCA2+15 (C2-5)
7 - - -C3 C3 | Pin | Pin | Wire | Destination | | 1 | G # | WH | MPX-G # 5 (C6-5) | Pin Pin Wire No. Name Color Pin Pin Wire Destination Destination 1 G# WH MPX-G#1 (C2-5) 1 G# WH MPX-G#3 (C4-5) 2 A GG MPX-A1 (C2-4) 2 A GG MPX-A3 (C4-4) 2 A GG MPX-A5 (C6-4) 3 A # SB MPX-A #1 (C2-3) 3 A # SB MPX-A # 3 (C4-3)
4 B PK MPX-B3 (C4-2)
5 C BR MPX-C4 (C4-1) 3 A # SB MPX-A # 5 (C6-3) 4 B PK MPX-B5 (C6-2) 4 B PK MPX-B1 (C2-2) 5 C BR MPX-C2 (C2-1) 5 C BR MPX-C6 (C6-1) 6 IC GY PCA4-IC (C3-7) 6 IC GY CNB-IC (C4-1) 7 IC GY PCA2-IC (C3-6) 7 IC GY PCA4-IC (C3-6) 7 IC GY PCA6-IC (C3-6) PCA6 PCA2 PCA4 C1 C1 C1 Pin Pin Wire No. Name Color | Pin | Pin | Wire | Destination | | 1 | C # | RE | MPX-C #2 (C3-12) | Pin Pin Wire No. Name Color Destination Destination 1 C# RE MPX-C#6 (C7-12) 1 C# RE MPX-C #4 (C5-12) 2 D OR MPX-D4 (C5-11) 2 D OR MPX-D2 (C3-11) 2 D OR MPX-D6 (C7-11) 3 D# YE MPX-D#4 (C5-10)
4 E GR MPX-E4 (C5-9)
5 F BE MPX-F4 (C5-8) 3 D# YE MPX-D#2 (C3-10) 4 E GR MPX-E2 (C3-9) 3 D# YE MPX-D#6 (C7-10) 4 E GR MPX-E6 (C7-9) YE MPX-D#4 (C5-10) 5 F BE MPX-F2 (C3-8)
6 F# VI MPX-F2 (C3-7)
7 G GY MPX-G2 (C3-6) 5 F BE MPX-F6 (C7-8) 6 F# VI MPX-F#6 (C7-7) 6 F# VI MPX-F#4 (C5-7) 7 G GY MPX-G4 (C5-6) 7 G GY MPX-G6 (C7-6) | Pin | No. | Name | Color | Destination | | 1 | -15 | BR | PCA1--15 (C2-2) | Pin Pin Wire Color
1 —15 BR I Pin Pin Wire Destination 1 -15 BR PCA3--15 (C2-2)
2 -15 BR PCA5 15 (C2-2) BR PCA5--15 (C2-2) 2 -15 BR PCA7--15 (C2-1)
3 E BL PCA5-E (C2-4) 2 -15 BR PCA3--15 (C2-1) BR PCA5--15 (C2-1) 3 E BL PCA3-E (C2-4)
4 E BL PCA5-E (C2-3) 3 E BL PCA1-E (C2-4) 4 E BL PCA3-E (C2-3)
5 +15 OR PCA1-+15 (C2-6) E BL PCA5-E (C2-3) 4 E BL PCA7-E (C2-3) 5 +15 OR PCA5-+15 (C2-6) 5 +15 OR PCA3-+15 (C2-6) +15 OR PCA5-+15 (C2-5) 6 +15 OR PCA3-+15 (C2-5) 6 +15 OR PCA7-+15 (C2-5) C3 C3 C3 | Pin | No. | Name | Color | Destination | 1 | G # | WH | MPX-G #6 (C7-5) Destination Destination 1 G# WH MPX-G#2 (C3-5) 1 G# WH MPX-G#4 (C5-5) 2 A GG MPX-A2 (C3-4) 2 A GG MPX-A4 (C5-4) 2 A GG MPX-A6 (C7-4) 3 A # SB MPX-A #6 (C7-3) SB MPX-A #4 (C5-3) 3 A # SB MPX-A # 2 (C3-3) 3 A# 4 B PK MPX-B6 (C7-2)
5 C BR MPX-C7 (C7-1)
6 IC GY PCA5-IC (C3-7)
7 IC GY PCA7-IC (C3-6) 4 B PK MPX-B4 (C5-2) 5 C BR MPX-C5 (C5-1) PK MPX-B2 (C3-2) 5 C BR MPX-C3 (C3-1)
6 IC GY PCA1-IC (C3-7)
7 IC GY PCA3-IC (C3-6) 6 IC GY PCA3-IC (C3-7)
7 IC GY PCA5-IC (C3-6)

PCA

View from the component side of the



(Notes)

1. Circuit Board: LC86130 I

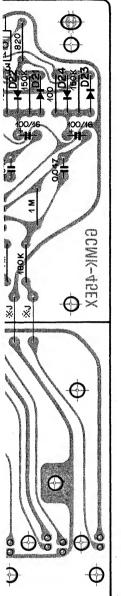
2. IC

IC1, 2 : NJM4558D

3. Diodes

D1 ~ 8 : 1S1555 (1S

KEP-NA80700 A



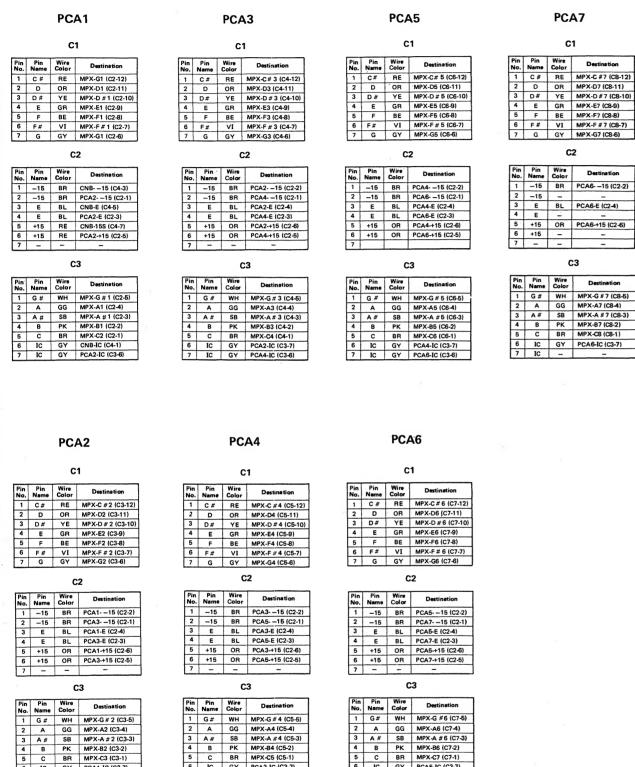
:86120 🗓

M4558DN

1555 (1S2473)

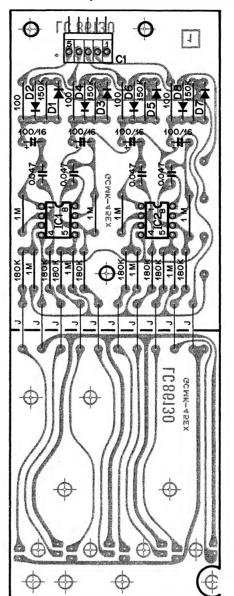
A GG MPX-A2 (C3-4)

3 A # SB MFX-R2 (C3-2)
4 B PK MPX-B2 (C3-2)
5 C BR MPX-C3 (C3-1)
6 IC GY PCA1-IC (C3-7)
7 IC GY PCA3-IC (C3-6)



PCA, PCB Circuit Board & Wiring

View from the component side of the circuit board



C1

(Notes)

1. Circuit Board : LC86130 1

2. IC

IC1, 2 : NJM4558DV

3. Diodes D1~8

: 1S1555 (1S2473)

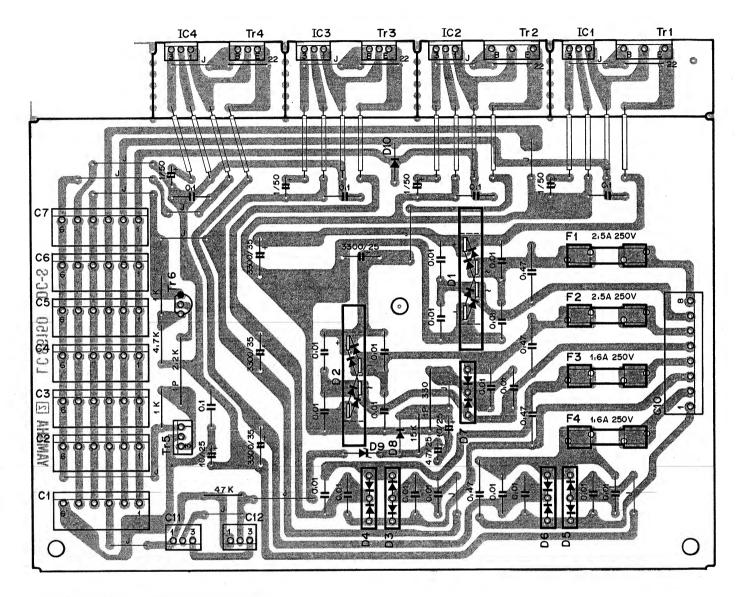
KEP-NA80700 ₼

6 IC GY PCA3-IC (C3-7)
7 IC GY PCA5-IC (C3-6)

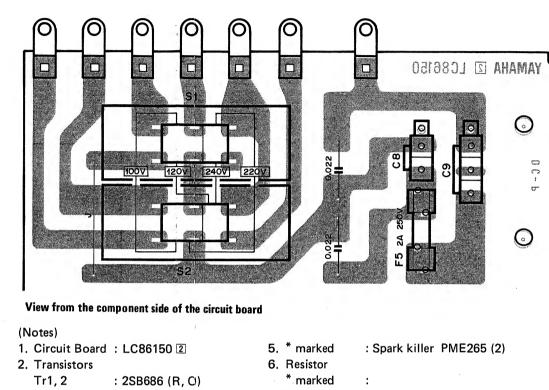
5 C BR MPX-C7 (C7-1) 6 IC GY PCA5-IC (C3-7)

7 IC GY PCA7-IC (C3-6)

DC Circuit Board & Wiring



View from the component side of the circuit board



Tr1, 2 : 2SB686 (R, O)
Tr3, 4, 5 : 2SB595 (O, Y)
Tr6 : 2SC509 (O, Y)

3. IC

IC1 : μPC14312H IC2 : μPC14305H IC3, 4 : μPC14315H

4. Diodes

D1, 2 : 5B2 D3, 5 : 1D2Z1 : D4, 6, 7 : 1D2C1 D8, 10 : 10E-1 D9 : RD3.6EB1 7. Connector

C1 ~ 7 : # 5273-06 C8 : LB-02 C9 : LB-03 C10 : # 5273-08

C11, 12 : NH Connector 3P (T, E)

		C	:1
Pin No.	Pin Name	Wire Color	Destination
1	-7	GR	CR-M5V (C2-3)
2	Vss	BL	MK1-Vss (C9-5)
3	-12	BE	CR-MG (C2-1)
4	-15	-	
5	E	_	_
6	+158	RE	CNB-+15S (C3-1)

C2

 Pin No.
 Pin Name
 Wire Color
 Destination

 1
 --7
 GR
 KC--7 (C7-1)

 2
 Vss
 BL
 KC-Vss (C7-2)

 3
 -12
 BE
 KC--12 (C7-3)

 4
 -15

 5
 E
 BL
 KC-E (C7-5)

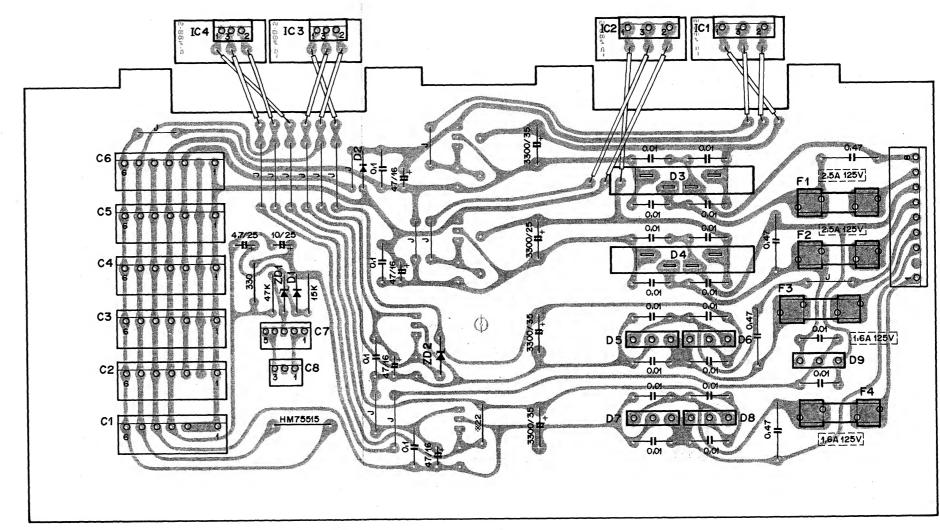
 6
 +15
 OR
 KC-+15 (C7-6)

Destination	Wire Color	Pin Name	Pin No.
CNP-AC1 (C2-1)	SB	AC1	1
-	-	_	2
CNP-AC2 (C2-3)	BR	AC2	3

2 PON PK RW-PON (C9-2	Pin No.	Pin Name	Wire Color	Destination
- 1011 111 111110111001	1	-12	BE	RW12 (C9-1)
3 —7B VI RW- —7B (C9-	2	PON	PK	RW-PON (C9-2)
*	3	-7B	VI	RW7B (C9-3)
		-/6	V1	NW/6 (C3-3

C11

DC Circuit Board & Wiring



-	
	C6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	C5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	C3 00000 C7 000 000 000 000 000 000 000 00
	C2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	C1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

View from the component side of the circuit board

0, 10	
IC1	: μPC14312H
IC2	: μPC14305H
IC3, 4	: μPC14315H
4. Diode	
D1, 2	: 10E-1
D5, 4	: 5B2
D5, 7	: 1D2Z1
D6, 8, 9	: 1D2C1
5. Zener Di	ode

1. Circuit Board : LC86380 🗓

Tr1, 2 : 2SB686 (R, O) Tr3, 4 : 2SB595 (O, Y)

(Notes)

3. IC

2. Transistor

ZD1	: RD3.6EB1	
ZD2	: RD6.2EB	

Common Model	F1, F2	F3, F4	NA Number
US. American Canadian	UL) 2.1A 125V	UL) 1.6A 125V	80746
Japan	7 2.5A 250V	₩ 1.6A 250V	80739
North European General Export	S T2.5A 250V	S T1.6A 250V	80747

	C1						c	2
Pin No.	Pin Name	Wire Color	Destination		Pin No.	Pin Name	Wire Color	Destination
1	-7	GR	SELL7 (C3-2)		1	-7	GR	CR-M5V (C2-3)
2	Vss	-	-	1	2	Vss	BL	MK4-Vss (C9-5)
3	-12	BE	SELL 12 (C1-5)	1	3	-12	BE	CR-MG (C2-1)
4	-15	-	-	1	4	-15	BR	EQ15 (C2-2)
5	Vss	BL	SELL-Vss (C1-2)	1	5	E	BL	EQ-E (C2-5)
6	+15	-	_	ĺ	6	+15	OR	EQ-+15 (C2-3)
				,				

-	Pin No.	Pin Name	Wire Color	Destination	Pin No.	
7	1	-7	GR	STO7 (C1-2)	1	Г
7	2	Vss	-	-	2	
7	3	-12	BE	A12 (C10-1)	3	
٦	4	-15	BR	A15 (C10-2)	4	
7	5	E	BL	A-E (C10-6)	5	Γ
7	6	+15	OR	A-+15 (C10-7)	6	Γ
						_

Pin No.	Pin Name	Wire Color	Destination
1	-7	GR	RW7 (C8-1)
2	Vss	BL	RW-Vss (C8-2)
3	-12	BE	RW12 (C8-3)
4	-15	-	-
5	E	-	_
6	+15	-	_

C4

Pin No.	Pin Name	Wire Color	Destination
1	-7	GR	SELR 7 (C1-2)
2	Vss	BL	FM-Vss (C2-2)
3	-12	BE	FM12 (C2-3)
4	~15	BR	FM15 (C2-6)
5	E	BL	FM-E (C2-5)
6	+15	OR	FM-+15 (C2-4)

Pin No.	Pin Name	Wire Color	Destination
1	-7	GR	KC7 (C7-1)
2	Vss	BL	KC-Vss (C7-2)
3	-12	BE	KC12 (C7-3)
4	-15	-	_
5	E	BL	KC-E (C7-5)
6	+15	OR	KC-+15 (C7-6)

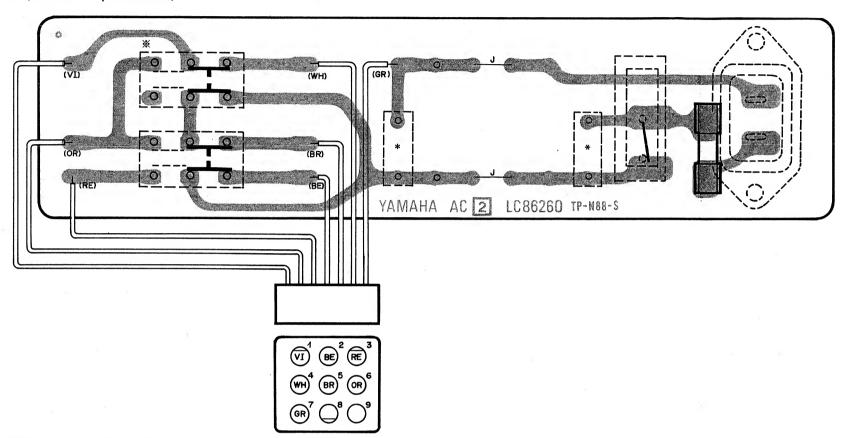
Destination	Wire Color	Pin Name	Pin No.
RW12 (C9-1	BE	-12	1
	~	~	2
RW-PON (C9-2	GR	PON	3
_	-	_	4
RW7B (C9-3	VI	~7B	5

C7

Pin No.	Pin Name	Wire Color	Destination
1	-12	BE	BB UNIT ⊖
2	-	-	_
3	-7B	VI	BB UNIT +

AC Circuit Board & Wiring

AC (General Export Model)



View from the printed pattern side of the circuit board.

(Notes)

1. Circuit Board : LC86260

2. Capacitor

(*) marked : Spark Killer Capacitor 250V/0.022µF

3. Fuse

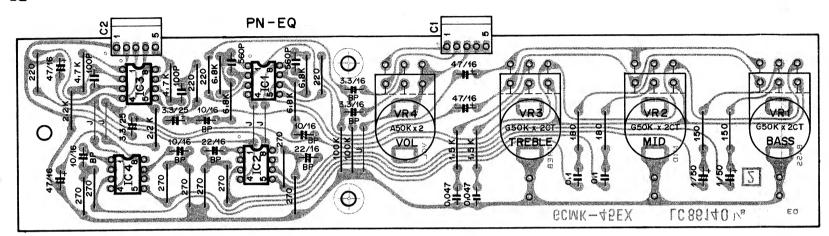
Common Model	NA No.	Fuse
General Export	NA80734	S T1.6A 250V
US. American Canadian	NA80733	(UL) 1.6A 125V
Japan	NA80735	₹ 1.6A 250V

※ U.S. American & Canadian Model



PN (EQ, SEL-R, SEL-L, TET) Circuit Board & Wiring

EQ



0000000000

1. Circuit Board : LC86140 2 2/7

10

YAMAHA

: NH Connector 10P (B, E)

: NH Connector 8P (B, E)

KEP-NA80703-04 🕸

View from the component side of the circuit board

C1

1 EQI2 S YE A-EQ2 (C5-10)
2 EQI1 S OR A-EQ1 (C5-6)

SEL-R

16

C1

Pin Pin Wire Destination

1 L12 GY RW-L12 (C3-8)

2 S4 VI RW-S4 (C3-7)
3 L11 BE RW-L11 (C3-6)
4 S3 GR RW-S3 (C3-6)
5 L10 YE RW-L10 (C3-4)
6 S2 OR RW-S2 (C3-3)
7 L9 RE RW-L9 (C3-2)
8 S1 BR RW-S1 (C3-1)
9 ST1 PK DW-ST* (C3-1)

ST1 PK RW-ST1 (C4-9) Vss BL RW-Vss (C4-10)

VI RW-S4 (C3-7)

32							
Pin No.	Pin Name	Wire Color	Destination				
1	E	BL	CNB-E (C1-4)				
2	EQ01	SRE	A-TRMI1 (C4-7)				
3	-15	BR	CNB15 (C1-2)				
4	+15	OR	CNB-+15 (C1-6)				
5	EQ02	SBR	A-TRMI2 (C4-5)				

PN-SEL-R

13

14

C2

7 L13 RE RW-L13 (C4-2) 8 S5 BR RW-S5 (C4-1)

Destination

15

View from the component side of the circuit board

SEL-R

12

LC861402/s GCMK-45EX

(Notes)

C1

C2

2. Connector

(Notes)

1. Circuit Board : LC 86140 2 1/7

2. IC

9

IC1 ~ 4

3. Connector

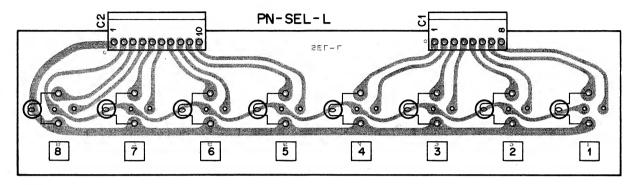
C1, 2

: NJM4558DV

: NH Connector 5P (B, E)

KEP-NA80702-04 ▲

SEL-L



C2

| Pin | Name | Color | Destination | | 1 | Vss | BL | RW-Vss (C2-10) | 2 | STO | GG | RW-STO (C2-9) |

S8 VI RW-S8 (C2-7)

4 S8 VI RW-S8 (C2-7)
5 L7 BE RW-L7 (C2-6)
6 S7 GR RW-S7 (C2-5)
7 L6 YE RW-L6 (C2-4)
8 S6 OR RW-S6 (C2-3)
9 L5 RE RW-L5 (C2-2)

10 S5 BR RW-S5 (C2-1)

View from the component side of the circuit board

C1 /

Pin Name	Wire Color	Destination	
L4	GY	RW-L4 (C1-8)	
S4	VI	RW-S4 (C1-7)	
L3	BE	RW-L3 (C1-6)	
S 3	GR	RW-S3 (C1-5)	
L2	YE	RW-L2 (C1-4)	
S2	OR	RW-S2 (C1-3)	
L1	RE	RW-L1 (C1-2)	
S1	BR	RW-S1 (C1-1)	

(Notes)

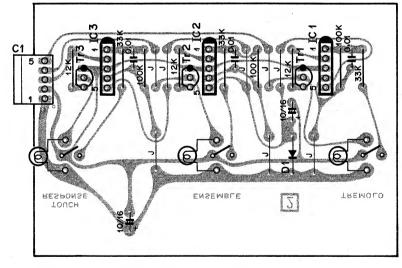
1. Circuit Board : LC86140 2 3/7

2. Connector

C1 : NH Connector 8P (B, E) : NH Connector 10P (B, E) C2

KEP-NA80705-04 A

TET



View from the component side of the circuit board

(Notes)

1. Circuit Board : LC86140 2 4/7

2. Transistors

Tr1 ~ 3 : 2SC509 (O, Y)

3. IC IC1 ~ 3

: BA634

4. Diode

: 1S1555 (1S2473) D1

5. Connector C1

: NH Connector 5P (B, E)

Pin No.	Pin Name	Wire Color	Destination
1	Vss	BL	CNB-Vss (C6-3)
2	-12	BE	CNB12 (C6-1)
3	TRS	RE	KC-PS2 (C3-2)
4	ENS	GR	A-ENSS (C5-8)
5	TRM	BE	A-TRMSW (C6-6)

C1

KEP-NA80705-04 △

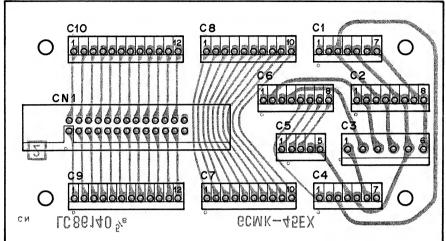
75

11

76 PN Circuit Board & Wiring

PN (CN, DET, EFF) Circuit Board & Wiring

CN



View from the component side of the circuit board

(Notes)

1. Circuit Board : LC86140 2 5/7

2. Connector

C1, 4 : NH Connector 7P (T, E) C2, 6 : NH Connector 8P (T, E)

C5 : NH Connector 5P (T, E) C7, 8 : NH Connector 10P (T, E)

C9, 10 : NH Connector 12P (T, E)

C3 6P (T, E) 3.96 mm : Connector CN1 : Bracket cable connector 26P (T, E)

C1

1 - - - -2 -15 BR EQ--15 (C2-3) 3 -15 - - -4 E BL EQ-E (C2-1) 5 E - - -6 +15 OR EQ+15 (C2-4)

-12 BE A- -12 (C10-1) 6 E - - -7 +15 OR A-+15 (C10-7) 8 +15 - -

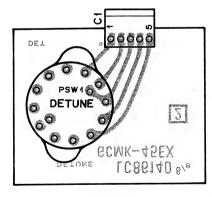
C2

1 15S RE DC-+15S (C1-6)
2 Vss BL DC-Vss (C2-2) 3 -12 BE DC--12 (C2-3) 4 -15 BR DC--15 (C2-4) 5 E BL DC-E (C2-5) 6 +15 OR EC-+15 (C2-6)

СЗ

KEP-NA80706-04 A

DET



(Notes)

1. Circuit Board : LC86140 26/7

2. PSW1

: Rotary SW SRM-125

3. Connector

C1

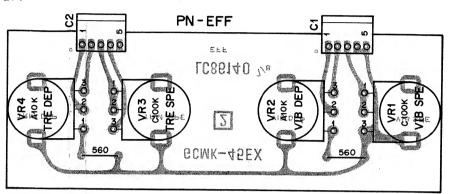
: NH Connector 5P (B, E)

View from the component side of the circuit board

KEP-NA80707-04 🕸

Pin No.	Pin Name	Wire Color	Destination
1	SD2	GR	KC-DP3 (C3-5)
2	SD1	OR	KC-DP1 (C3-3)
3	Vss	BL	KC-PS2 (C1-1)
4	RD1	BE	KC-RP1 (C3-6)
5	RD2	VI	KC-RP2 (C3-7)

EFF



View from the component side of the circuit board

C1

Pin No.	Pin Name	Wire Color	Destination
1	VDD	GR	A-V1BDI (C9-4)
2	VDI	BE	A-V1BDO (C9-7)
3	VSI	VI	A-V1BSP (C9-1)
4	E	BL	A-E (C7-5)
5	F	_	

(Notes)

1. Circuit Board : LC86140 2 7/7

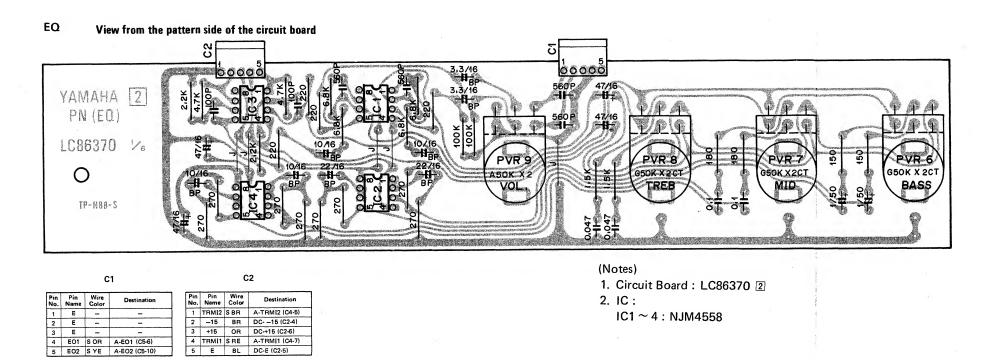
2. Connector

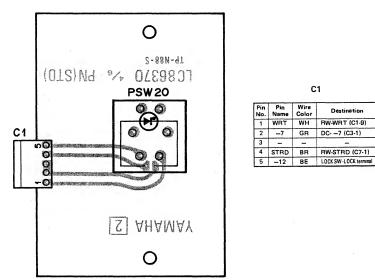
C1, 2 : NH Connector 5P (B, E)

in lo.	Pin Name	Wire Color	Destination
1	TDO	BR	A-TRMDI (C6-8)
2	TDI	RE	A-TRMDO (C6-1)
3	TSO	OR	A-TRMDI (C6-2)
4	TSI	YE	A-TRMSO (C6-5)
5	_	_	-

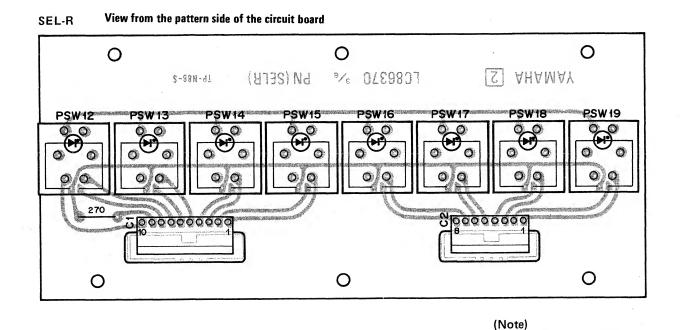
KEP-NA80708-04 &

PN (EQ, SEL-R, SEL-L, EFF, STO) Circuit Board & Wiring





STO View from the pattern side of the circuit board



C2

 Pin No.
 Pin Name
 Wire Color
 Destination

 1
 L13
 RE
 RW-L13 (C4-2)

2 S5 BR RW-S5 (C4-1)
3 L14 YE RW-L14 (C4-4)
4 S6 OR RW-S6 (C4-3)
5 L15 BE RW-L15 (C4-6)
6 S7 GR RW-S7 (C4-5)
7 L16 GY RW-L16 (C4-8)

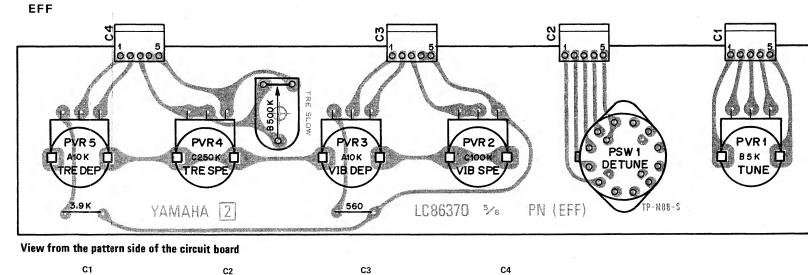
C1

Pin Name Color Destination

1 ST1 PK RW-ST1 (C4-9)

2 -7 GR DC-7 (C5-1) 3 L9 RE RW-L9 (C3-2) 4 S1 BR RW-S1 (C3-1) 5 L10 YE RW-L10 (C3-4)

5 L10 TE HW-L10 (C3-4)
6 S2 OR RW-S2 (C3-3)
7 L11 BE RW-L11 (C3-6)
8 S3 GR RW-S3 (C3-5)
9 L12 GY RW-L12 (C3-8)
10 S4 VI RW-S4 (C3-7)



		:1			C	2
Pin Name	Wire Color	Destination	Pin No.	Pin Name	Wire Color	Destination
E	BL	A-E (C7-5)	1	Vss	BL	KC-Vss (C1-1)
PC3	GR	A-PC3 (C7-1)	2	DP1	OR	KC-DP1 (C3-3
PC2	OR	A-PC2 (C7-3)	3	DP3	GR	KC-DP3 (C3-5
PC1	YE	A-PC1 (C7-4)	4	-	_	_
E	BL,	EFF-E(C1-1)	5	-	-	_
	PC2	Name Color E	Name Color Destination E	Name Color Destination No. E BL A-E (C7-5) 1 PC3 GR A-PC3 (C7-1) 2 PC2 OR A-PC2 (C7-3) 3 PC1 YE A-PC1 (C7-4) 4	Name Color Destination No. Name	Name Color Destination No. Name Color

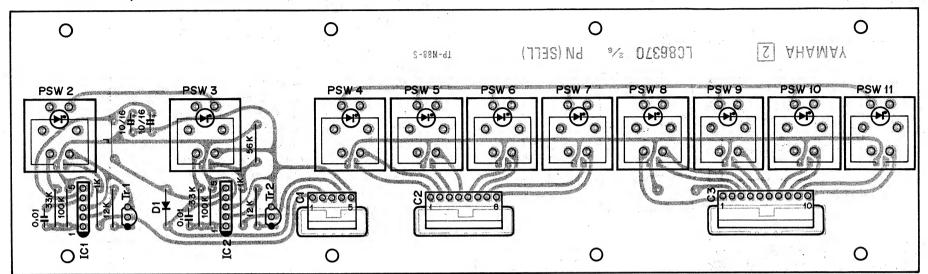
 Pin No.
 Pin No.
 Wire Color
 Destination
 Pin No.
 Pin No.
 Wire Color
 Destination

 1
 -

1. Circuit Board : LC86370 2

1. Circuit Board: LC86370 2

View from the pattern side of the circuit board



Destination 2 Vss BL DC-Vss (C1-5)

1 L1 RE RW-L1 (C1-2)
2 S1 8R RW-S1 (C1-1) 3 L2 YE RW-L2 (C1-4) 4 S2 OR RW-S2 (C1-3) 3 - - - -4 ENSS GR A-ENSS (C5-8) 5 L3 BE RW-L3 (C1-6) 6 S3 GR RW-S3 (C1-5) 7 L4 GY RW-L4 (C1-8) 5 -12 BE DC- -12 (C1-3)

8 S4 VI RW-S4 (C1-7)

C3

| Pin | Name | Wire | Destination | | 1 | STO | GG | RW-STO (C2-9) | | 2 | -7 | GR | DC-7 (C1-1) | 2 -7 GR DC -7 (C1-1) 3 L5 RE RW-L5 (C2-2) 4 S5 BR RW-S5 (C2-1) 5 L6 YE RW-L6 (C2-4) 6 S6 OR RW-S6 (C2-3) 7 L7 BE RW-L7 (C2-6) 8 S7 GR RW-S7 (C2-5) 9 L8 GY RW-L8 (C2-8)

(Notes)

1. Circuit Board: LC86370 2

2. IC

IC1, 2 : BA634

3. Tr

Tr1, 2 : 2SC509 4. Diode

D : 1S1555

Other Circuit Boards & Wiring

GS1

CNB

IC GY PCA-IC (C3-6) 7 15S RE PCA-+15 (C2-5)

Pin No.	Pin Name	Wire Color	Destination
1	DAMP	WH	CNP-DAMP (C3-1)
.2	TRM	GY	CNP-TREM (C3-2)
3	V1B	GG	CNP-V1B (C3-3)
4	E	BL	CNP-E (C3-4)
5	E	BL	CNP-E (C3-5)

			_	-
	Pin No.	Pin Name	Wire Color	Destination
	.1	-12	8E	TET12 (C1-2)
	-2	-12	_	_
	. 3	Vss	BL	TET-Vss (C1-1)
•	4	Vss	_	-
	5	IC	GY	A-IC (C5-3)
	.6	DAMP	WH	KC-DAMP (C3-9)
	.7	TRM	GR	A-TRMPD (C6-7)
	8	V1B	GG	A-V1B (C9-2)

| Pin | No. | Name | Wire | Color | Destination | 1 | LIN | VI | A-LIN (C4-3) | 2 | EXP | BE | A-EXP (C4-1) | 3 | PC1 | YE | A-PC1 (C7-4) | 4 | PC2 | OR | A-PC2 (C7-3) | E | COLOR | 5 PC3 GR A-PC3 (C7-1)
6 WRITE WH RW-WRITE (C1-9) 7 -12 BE RW--12 (C1-10)
8 PLK SB RW-PLK (C3-9)

9 S1 BB RW-S1 (C3-10) 10 - - -

	No.	Name	Color	Destination
	1	LIN	BR	CNX-LIN (C1-1)
	2	EXP	RE	CNX-EXP (C1-2)
	3	PC1	OR	CNX-PC1 (C1-3)
į	4	PC2	YE	CNX-PC2 (C1-4)
i	5	PC3	GR	CNX-PC3 (C1-5)
	6	WRITE	BE	CNX-WRITE (C1-
	7	-12	8E	CNX12 (C1-7)
ı	8	PLK	SB	CNX-PLK (C1-8)
ı	9	S1	_	_
	10	-	-	_

11 D3A SB CNX-D3A (C3-11)
12 D4A PK CNX-D4A (C3-12)

1 G BR CNX-G (C3-1)

1 G BR CNX-G (C3-1)
2 G RE CNX-G (C3-2)
3 G OR CNX-G (C3-2)
4 READY YE CNS-READY (C3-4)
5 CMD1 GR CNX-CMD1 (C3-6)
6 G BE CNX-G (C3-6)
7 G VI CNX-G (C3-7)
8 CTRL1 GY CNX-CTRL1 (C3-8)
9 D1A WH CNX-D1A (C3-9)
10 D2A GG CNX-D2A (C3-10)
11 D3A SB CNX-D1A (C3-11)

Pin No.	Pin Name	Wire Color	Destination
1	φA	BR	CNX- ØA (C4-1)
2	φв	RE	CNX- ØB (C4-2)
3	BUSY	OR	CNX-BUSY (C4-3)
4	CMDÖ	YE	CNX-CMD0 (C4-4)
5	CMD2	GR	CNX-CMD2 (C4-5)
6	COMR	BE	CNX-COMR (C4-6)
7	CTRLO	VI	CNX-CTRLO (C4-7
8	EXT	GY	CNX-EXT (C4-8)
9	D2M	WH	CNX-D2M (C4-9)
10	D3M	GG	CNX-D3M (C4-10)
11	D4M	SB	CNX-D4M (C4-11)
12	G	PK	CNX-G (C4-12)

BB C1

Pin Pin Wire No. Name Color Destination 1 -12 BE DC- -12 (C12-1)

GS2

BB

		_	4
in lo.	Pin Name	Wire Color	Destination
1			
2	-12	BE	DC12 (C8-1)
3	-	_	_
4	-7B	VI	DC7B (C8-3)

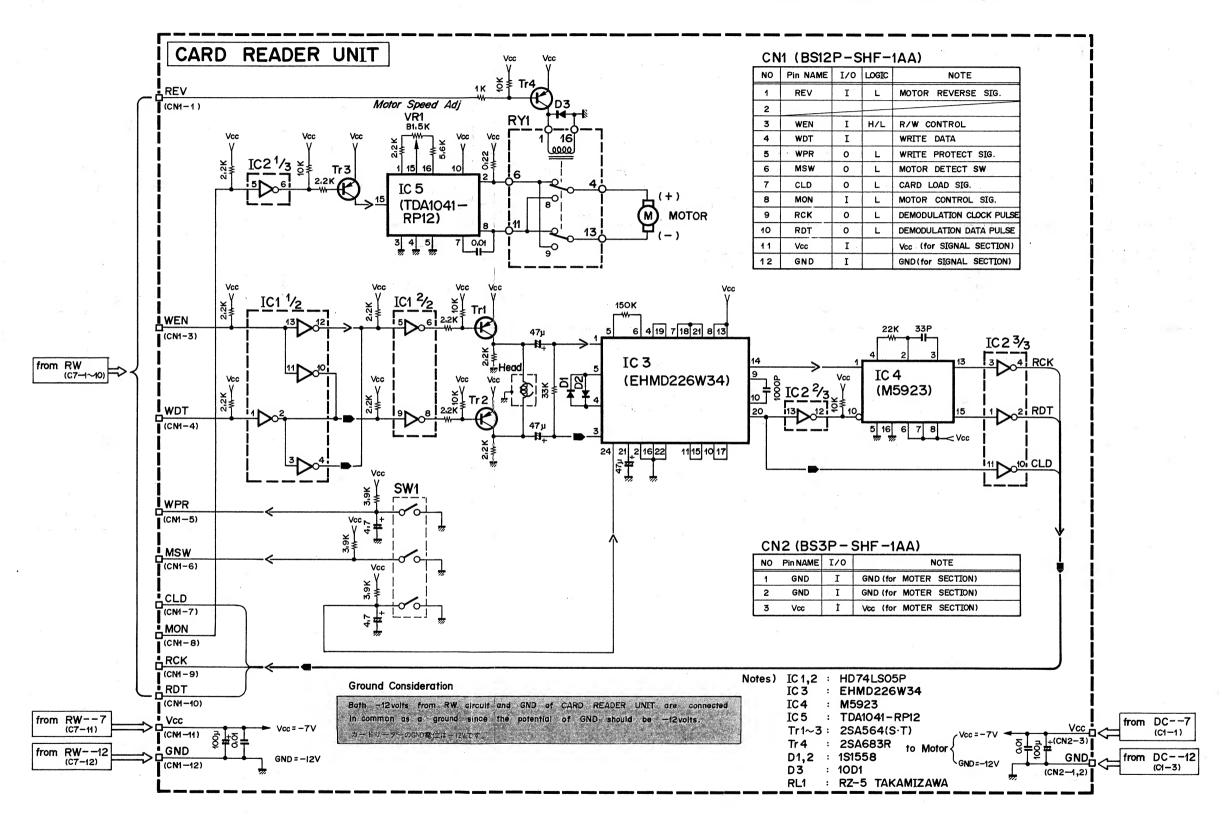
PGM

LOCK

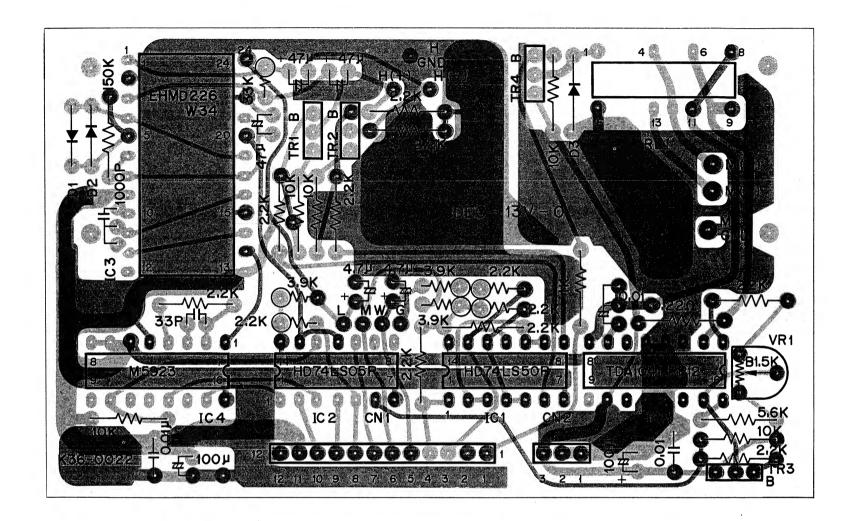
CN No.	CN Name	Destination
CN1	24P connector	(to RW-CN5)

Pin No.	Pin Name	Wire Color	Destination
1	CENTER	WH	RW-PLK (C3-9)
2	LOCK	BE	RW12 (C1-10)
3		BE	STO12 (C1-5)

CARD READER UNIT Circuit Diagram



CARD READER UNIT Circuit Board & Wiring



_		
·	, 1	

Pin No.	Pin Name		
1	REV	RE	RW-REV (C7-2)
2	_	_	-
3	WEN	GR	RW-WEN (C7-5)
4	WDT	BE RW-WDT (C7-6)	
5	WPR	YE RW-WPR (C7-4)	
6	MSW	OR	RW-MSW (C7-3)
7	CLD	VI	RW-CLD (C7-7)
8	MON	GY	RW-MON (C7-8)
9	RCK	WH	RW-RCK (C7-9)
10	RDT	GG	RW-RDK (C7-10)
11	+5V	GR	RW7 (C7-11)
12	GND	BE	RW12 (C7-12)

C2

Pin No.	Pin Name	Wire	Destination
1	MG	BE	DC12 (C1-3)
2	MG	_	_
2	*****	-00	00 7/01/1

C1

Pin No.	Pin Name	Wire Color	Destination
1	REV	RE	RW-REV (C7-2)
2	-	-	_
3	WEN	GR	RW-WEN (C7-5)
4	WDT	RE	RW-WDT (C7-6)
5	WPR	YE	RW-WPR (C7-4)
6	MSW	OR	RW-MSW (C7-3)
7	CLD	Vļ	RW-CLD (C7-7)
8	MON	GY	RW-MON (C7-8)
9	RCK	WH	RW-RCK (C7-9)
10	RDT	GG	RW-RDI (C7-10)
11	+5V	GR	RW7 (C7-11)
12	GND	DE	PW12 (C7-12)

C2

Pin No.	Pin Name	Wire Color	Destination
1	MG	BE	DC12 (C2-3)
2	MG	-	-
3	M5V	GR	DC7 (C2-1)

YAMAHA GS1 PARTS LIST

CONTENTS

A.	Electronic Components (電気部品)····································
В.	Cabinet (外装)····· 6
C	Pedal Assembly (ペダルAss'y)・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・
D.	D Rack & Power Supply Unit (Dラック及び電源ユニット)・・・・・・・・・10
E.	Keyboard Assembly (鍵盤)······12
F.	CNX Plate (CNX プレート)・・・・・・・・14
G	Control Panel & Top Board Assembly (コントロールパネル及び屋根)16

A. Electronic Components (電気部品)

Re	Part No 1	D	escription	部品名	Remarks	Common Model	Markets
*	NA 80 69 20	Circuit Board	FM #8605	F M シ ー ト		GS2	, .
*	NA 80 69 30	– do. –	KC #8606	КСシート	0	GS2	
*	NA 80 69 40	- do	MPX #8607	M P X シート			
*	NA 80 69 50	– do. –	RW #8608	R W シート			
*	NA 80 69 60	– do. –	A #8609	A シ ー ト	-	GS2	
*	NA 80 69 70	– do. –	MK1 #8610	M K 1 シート			
*	NA 80 69 80	– do. –	MK2 #8611	M K 2 シート			
*	NA 80 70 10	do	DC #8615	D C シート			J
*	NA 80 74 40	do	DC #8615	n .		- 1	U,C
*	NA 80 74 50	do	DC #8615	n			G
*	NA 80 70 20	do	PN-EQ #8614	PN-EQ シート			
*	NA 80 70 30	– do. –	PN-SEL-R#8614	PN-SEL-Rシート			
*	NA 80 70 40	– do. –	PN-SEL-L#8614	PN-SEL-Lシート		10	
*	NA 80 70 50	– do. –	PN-TET #8614	PN-TET シート			
*	NA 80 70 60	– do. –	PN-CNB #8614	PN-CNB シート		-	
*	NA 80 70 70	do	PN-DEF #8614	PN-DEF シート			
*	NA 80 70 80	do	PN-EFF #8614	PN-EFFシート			
<u> </u>							
	i G 00 11 80		TC4013BP	I C	D Flip-Flop ,		
_	i G 00 12 40		TC4011BP	"	2-input NAND		
<u> </u>	i G 00 12 50		TC4027BP	"	J-K Flip-Flop		,
	i G 00 13 90		NJM4558DV	"	OP. Amp		
\vdash	i G 00 16 90		TC4016BP	"	Bilateral SW		
_	i G 00 17 20		TC4069UBP	"	Inverter		
	i G 00 17 70		TC4051BP	"	8ch Multiplexer		
·	i G 00 18 40		HD7400	"	2-input NANDx4		
_	i G 02 60 00		#02600	"	VCA		
	i G 02 68 10		HD74LS20P	" "	4-input NANDx2		
_	i G 02 69 10 i G 02 70 00		HD74LS00P HD7404P	"	Inverter		
	i G 02 70 10			"	Inverter		
-	i G 02 87 00		HD74LS04P μPC14315H	"	+15V Regulator	ļ	
	i G 03 29 00		iG03290	"	BBD Driver		
*	i G 03 32 00		μPC14312H	,,	+12V Regulator		*
*	i G 03 33 00		μPC14305H	"	+5V do		
*	i G 03 34 00		μPC311C	"	Voltage Comparator		
*	i G 03 35 00		μPC610D	"	10 bit D/A Convertor		
*	i G 03 36 00		μPC624	"	8 bit — do. —		
	i G 03 55 00		TC4028BP	. 11	Decoder		
	i G 03 81 00		TC4024BP	"	Counter		
*	í G 04 35 00	— do. —	TC40161BP	"	Programmable 4 bit Counter		
*	i G 04 37 00	— do. —	HD74LS08P	"	AND	·	
*	i G 04 38 00	– do. –	HD7417P	"	Buffer		
*	i G 04 40 00	— do. —	HD74LS74AP	"	D Flip-Flop		
*	i G 04 42 00		HD74LS138P	"	Decoder/Demultiplexer		
*	i G 04 43 00		HD74145P	. 11	BCD to Decimal Decoder		
*	i G 04 44 00		HD74LS161P	"	Synchronous 4 bit Counter		
*	i G 04 45 00	·	HD74LS240P	"	Bufferx8		
*	i G 04 46 00		SN74LS245	"	Octal Bus Transceivers		
*	i G 04 47 00	- do	SN74LS273	"	Octal D Flip-Flop		
*	i G 04 48 00		SN75366N	"	NAND(TTL to MOS)		
*	i G 04 49 00		μPD8035	"	CPU		
<u></u>	i G 04 50 00	– do. –	μPD8243	"	I/O EXP		

[※] New Parts (新規部品) (J: Japan, U: US.American, C: Canadian, G: General)

Ref. No.	Part No.	Descrip	otion	部 品 名	Remarks	Common Model	Markets
•	i G 04 52 00	IC	TC5516P	I c	2Kx8 bit RAM		
(i G 04 53 00	– do. –	TC4009UBP	n	Inverter		
*	i G 04 61 00		MN3009 .	"	256 Stage BBD		
*	i G 04 80 00	– do. –	HD74LS366	"	Bus Driver	_	
*	i G 04 83 00	- do	HD7416P	"	Inverter		
	i G 05 28 00	- do	TC40H032P	"	2-input OR x 4		
×	i T 31 10 00	– do. –	YM311	"	кс		
×	i T 31 20 00	- do	YM312	n	CP		
*	i T 31 60 00	- do	YM316	. "	ACC		
×	i T 31 80 00	– do. –	YM318	"	MPX	7	
×	i T 32 00 00	- do	YM320	"	IG		
×	i T 32 10 00	- do	YM321	"	EG		
×	i T 32 20 00	- do	YM322	"	EC		
×	i T 32 70 00	– do. –	YM327	"	ADD		
×	i T 33 40 00	- do	YM334	"	AG		
×	i T 34 40 00		YM344	ıı ı	PG		
×	i T 34 50 10	- do	YM34501	"	OPC		
*	i T 34 50 20		YM34502	ıı ı	ОРМ		
×	i T 34 70 00	- do	YM347	ıı .	VRG		
×	i T 43 90 00		PSA439	"	Pressure Sensor		
×	i T 63 30 00	- do	YM633	ıı .	SECII		
*	i N 00 33 00		MB8516	n	EP ROM iG04510		
	i A 05 09 10	Transistor	2SA509(Y)	トランジスタ			
-	i A 07 43 00	- do	2SA7.43A(B)	"			
-	i A 10 15 70	do	2SA1015(O,Y)	"			
	í B 05 95 20	- do	2SB595(O,Y)	"			
	i B 06 86 10	do	2SB686(R,O)	n			
	i C 04 58 80	– do. –	2SC458(B,C)	п			
	i C 04 58 90	- do	2SC458LG(C,D)	"			
	i C 04 59 00	- do	2SC458(C,D)	"			
	i C 05 09 20	– do. –	2SC509(Y)	"		_	
	i C 07 52 30	– do. –	2SC752(O,Y)	"			
	i C 12 12 00	– do. –	2SC1212A(C)	"			
	i C 19 59 30	– do, –	2SC1959(O,Y)	"			
	i E 10 12 00	FET	2SK105F	F E T			
	i F 00 00 10	Diode	1N34A	ダイオード			
	i F 00 00 40		1\$1555	"			
	i F 00 00 70		1S2473VE	. "			
	i F 00 08 80	- do Zener	WZ-050	ツェナーダイオード			
4	i F 00 16 60	- do do	RD3.6EB1	"			
	i H 00 01 10		5B-2	ダイオード			
	i H 00 02 80		1D2C1	"			
	i H 00 02 90		1D2Z1	"			
	i H 00 05 90	– do. –	10E-1	"			
	i K 00 02 90	Photo - Coupler	P873-13	フォトカプラー			
<u> </u>							
<u></u>	FC 08 54 70	Metalized Myler Cap.	0.47μF/100V	MMコンデンサ			
L							
	FD 15 21 80 w Parts (新規部品	Polystyrene Cap.	180PF	スチョン			

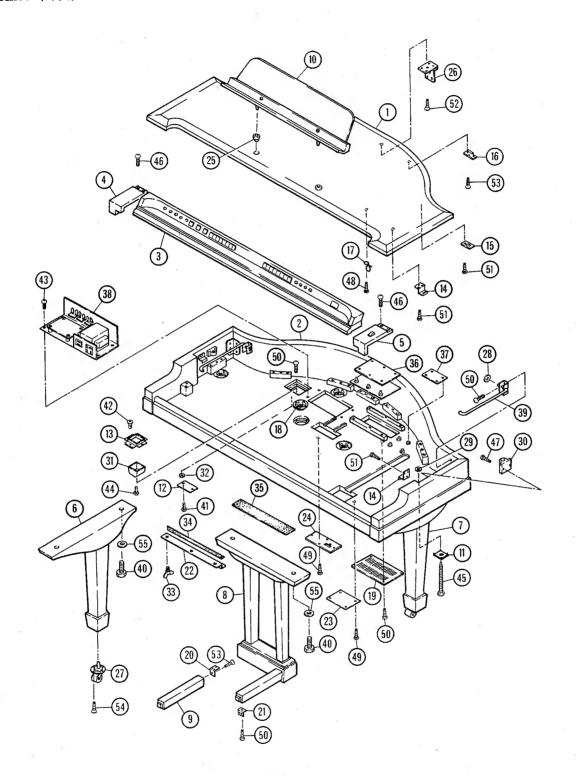
Ref. No.	Part No.	Descript	ion	部 品 名	Remarks	Common Model	Marke
	FD 15 22 70	Polystyrene Cap.	270PF	スチコン			
	FD 15 23 30	- do	330PF	"			
	FM:09 62 20	Bipolar Electrolytic Cap	2.2μF/16V	バイポーラケミコン			
	FM 09 63 30	- do	3.3µF/16V	"			
	FM 09 64 70	- do	4.7μF/16V	"			
-	FM 09 71 00		10μF/16V	"			7
	FM 09 72 20	- do	22μF/16V	"			
	FM 22 61 00	- do	1μF/25V	"		1	
	 	Spark Suppressor Cap.	0.022μF	スパークキラーコンデンサ		+ .	
	 	Electrolytic Cap.	3300μF/25V	ケミコン		-	
	FZ 00 24 00	- do	3300μF/35V	"		-	
	HL 31 53 30	Metal Oxide Film Resistor	330Ω 1W	酸金抵抗			
	HL 31 54 70	– do. –	470Ω 1W	"			
	HL 31 62 20	- do	2.2KΩ 1W	."		<u> </u>	
	HV 55 42 20	Flame Proof Carbon Resis	tor 22Ω	不燃化カーボン抵抗			
	HV 55 44 70	- do	47Ω	// // // // // // // // // // // // //		1	
	HV 55 51 00	- do	100Ω	","		+	
			10000			+	
	HZ 00 16 70	Module Resistor	4.7ΚΩx8	モジュール抵抗			
	HZ 00 16 80	– do. –	4.7KΩx12	"			
	HZ 00 16 90	– do. –	10KΩx12	"	*		
	HZ 00 17 00	– do. –	27ΚΩx12	"			
	HZ 00 17 10	– do. –	100KΩx10	"			<u></u>
	HZ 00 17 20	– do. –	470KΩx12	n n			
	HZ 00 17 30	Metal Film Resistor	1KΩ ±0.1%	金皮抵抗	1		
	HZ 00 17 40	do	2KΩ ±0.1%	"			
	HS 11 04 00	Variable Resistor	Β5ΚΩ 16φ	可变抵抗器	Pitch	+	
	HS 31 11 10	- do	G50KΩx2 16¢	"	Center Tap Treb. Mid. Bass	+	
	HS 31 11 20	- do, -	Α50ΚΩx2 16φ	"	Vol.	1	
	HS 31 11 30	- do	Α10ΚΩ 16φ	"	Tre. Depth, Vib. Depth	+	
	HS 31 11 40	– do. –	C100KΩ 16φ	11	Tre. Speed, Vib. Speed		
						1	
	 	Variable Resistor	Β10ΚΩ	半固定抵抗		1	
	HT 19 00 60		Β20ΚΩ	" "		+	
	HT 19 00 70 HT 19 01 30		B50KΩ B2KΩ	n n		-	
_						1	
	KA 10 09 40	See - Saw Switch		シーソースイッチ	Power	1	
	KA 40 05 00	Slide Switch		スライドスイッチ	Line Out		
	KA 40 07 00	- do		n	PGM Lock		
	KA 40 08 30	Voltage Selector		電圧切替器			
	KA 50 15 90			ロータリースイッチ	Detune		
	KA 90 17 20			プッシュスイッチ	·		<u> </u>
	KA:90 18 80	- do		ı, ıı	Store	-	
	KB 00 06 90	Fuse (Miniature)	T2.5A 250V	ミニチュアヒューズ		1	G
·		- do do	T1.6A 250V	"			G
	1	- do do	T2.0A 250V	"			G
		- do do	1.6A 250V	"			J

※ New Parts (新規部品)

Ref. No.	Part No.	Descript	ion		部 品 名	Remarks	Common Model	Markets
*	KB 00 23 60	Fuse (Miniature)	2.0A 250	0V	ミニチュアヒューズ			j
*	KB 00 23 70	- do do	2.5A 250	ΟÙ	<i>n</i> *	£ 0.		J
Ķ Z	KB 00 25 00	- do do	1.6A 125	5V	"			u,c
*	KB 00 25 10	− do. − − do. −	2.0A 129	5V	"			u,c
ĸ	KB 00 25 20	- do do	2.5A 125	5V	"			u,c
		*					-2-	
	NB 04 89 90	LED Unit	4		LEDユニット			
*	NB 81 60 60	Card Reader Unit			カードリーダーユニット			
ĸ	NB 81 61 50	Key Switch Unit I			スイッチユニットI	6		
×	NB 81 61 60	do II			" II	4		
	NB 03 70 40	Tablet Switch			タブレットスイッチ	Pedal		
ĸ	NB 81 61 70	Power Supply Unit			電源ユニット			J
× –	NB 81 72 20	– do. –			"			υ,c
×	NB 81 72 30				<i>"</i>		0	G
×	NB 81 74 00	Power Transformer Unit			電源トランスユニット			
*	MG 00 10 30	AC Cord			電源コード			J
<u>`</u>	MG 00 10 40		7		"			υ
`\ *	MG 00 10 50				"			G
<u>`</u>	MG 00 11 20				"			С
<u>.</u>	 	Flat Cable Assy	FM 30F	P	FM 線材キット	* .		
<u>`</u>	MZ 80 85 60		MPX 30F	Р	MPX "			
$\ - \ $	MZ 80 85 80		TD 20F		TD "			
<u>`</u>	MZ 80 85 90		RW 26		RW "			
`	11120000			-				
	GD 90 02 50	Line Transformer			ライントランス			
	GD:90 02:50	Line Hansionnei			. , , , , , , , ,			
	GE 30 03 50	Chake Cail	68μH		チョークコイル		ļ —	
	GE 90 01 70		125μH		OSCコイル			
	GE 90.01.70	OSC COIL	125μ11		00011		-	
	01100 10 00	Ceramic Vibrator	6.00MHz		セラミック発振子			
*	40 00 10 00	Columno Vibrator	0.0011112					
-	LB 10 04 70	Phone lack	S-G7641		ジャック			
-	LB 30 14 40		0 070-1		"		<u> </u>	
		Cannon Socket	XLR3-32		キャノンソケット			
	LB 20 18 20		2P		2 Pインレット			
*	LB 30 07 30		3P		2.5ピッチベースピン	Top Entry		
	LB 50 02 50		5P	-	"	- do		
-	LB 60 24 60		7P			- do		
-	LB 60 24 90		8P		"	- do, -		
-	LB 60 24 70	· · · · · · · · · · · · · · · · · · ·	10P			- do		
*	LB 60 24 70 LB 60 31 30		10P		<i>"</i>	- do		
-		1.01.01.00	5P		<i>"</i>	Side Entry		
<u>"</u> —	LB 50 02 70		6P			- do		
*	LB 60 37 00		7P			- do		
\vdash	LB 60 25 00		· · · · · · · · · · · · · · · · · · ·		"			
\vdash	LB 50 03 70		5P		"	Bootom Entry		
-	LB 60 30 60		10P		<i>"</i>	- do	-	
-	LB 60 30 70		10P		// // // // // // // // // // // // //	- do		
_	LB 30 07 20		3P	-	2.5ピッチハウジング			
<u> </u>	LB 50 02 40		5P					ļ
_	LB 60 36 80		6P		"	- "		
<u> </u>	LB 60 24 40		7P		"			
	LB 60 24 80	– do. –	8P		"		<u></u>	

Ref. No.	Part No.	Descripti	on	部 品 名	Remarks	Common Model	Market
	LB 60 24 50	Housing	10P	2.5ピッチハウジング			
	LB 60 29 20	- do	1:2P	11			-
	LB 60 24 20	Header	20P	ヘッダー			
	LB 60 35 50	- do, -	26P	n,			
	LB 60 24 30	- do	30P	"			
	LB 20 14 30		2P	2 P プ ラ グ			
	LB 30 07 70		3P	3P プラグ			
	LB 60 33 20	– do. –	24P	24P プラグ		1	
	LB 20 14 20		2P '	2P キャップ			
	LB 30 07 60	· · · · · · · · · · · · · · · · · · ·	3P	3P キャップ			
	LB 60 33 00		24P	24Pキャップ			
	LB 30 11 40		3P	コネクター			
	LB 60 38 30		8P			 	
	LB 60 38 10		8P	ハウジング			
	LB 60 39 00		24P				
$\overline{}$	LB 60 39 10		40P	1 Cソケット			
		Fuse Holder Pin	TU	" ヒューズホルダーピン			
	LB 10 05 60			コンタクトピン オス			
	FP 10 09 00	CONTRACT .		コンランドモン オス	Male		
	BB 00 44 30	Contact		2.5ピッチコンタクトピン			
			:		**************************************		
	BB 00 44 40			コンタクトピン メス	Female		
	BB 00 44 90			"			
	BB 00 49 90	- 00		"			
	00 00 00					•	
		Insulation Bushing	* * * * * * * * * * * * * * * * * * * *	絶縁ブッシュ			
	i L 00 04 00			"			
	i L 00 02 70			マイカベース			
	i L 00 04 60	- do					
i							
		Card Reader Unit		カードリーダーユニット			
		Mech. Unit, Card Reader		メカユニット	• •		
		Circuit Board, Card Reade	r K90-0711	C/R シート			
	i X 00 01 10		TDA1041-RP12	l C	E60-0039		
	i X 00 01 20		EHMD226W34	. 11	E60-0040		
	i X 00 01 30	- do	M5923	11	E60-1092		
	i G 05 26 00	– do. –	HD74LS05P	"	E60-1140		
	i A 05 64 90	Transistor	2SA564(S)	トランジスタ	E65-6054		
	1 X 00 01 40		2SA683-R	"	E65-6089		
	i X 00 01 50	Diode .	1S1558	ダイオード	E65-5001	-	
	i H 00 00 30	- do	10D1	"	E65-5002		
	KX 00 00 20	Relay	RZ-5	リレー	E62-1105		
	HX 00 00 10	Variable Resestor	Β1.5ΚΩ	半 固 定 抵 抗	E62-9540		
		A-100-100-100-100-100-100-100-100-100-10					
$\neg \uparrow$	NB 81 61 20	PC-1 Unit		PC-1 ユニット	12Key		****
\rightarrow	NB 81 61 30			PC-2 ユニット	16Key		
			-				
					-		
\dashv							
-							
						-00	
+							
	: : : !						

B. Cabinet (外装)



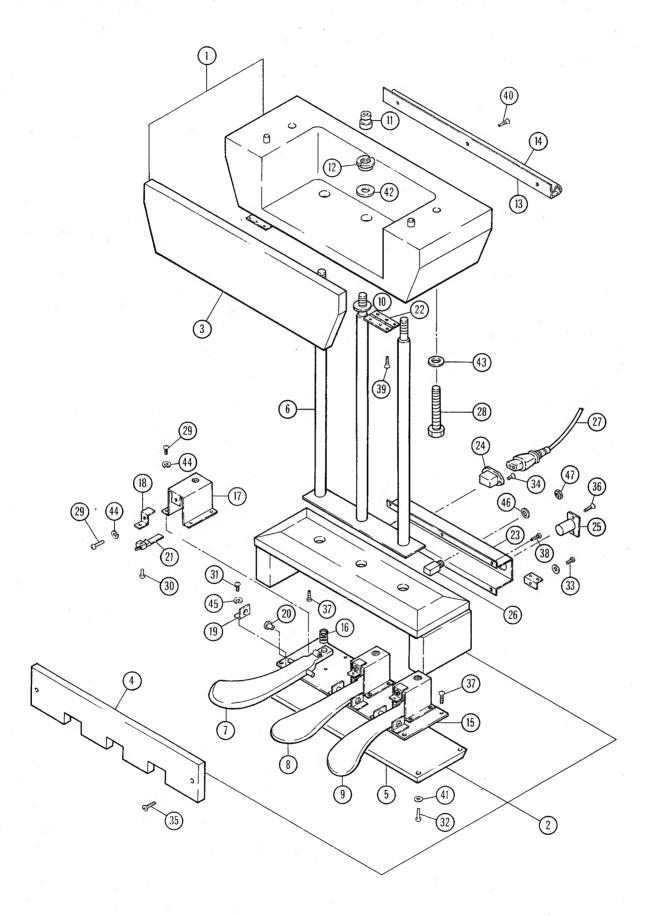
	Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets
*	1	DA 80 54 20	Top Board Ass'y	屋根集成			
*	2	DA 80 54 30	Side Board Ass'y	枠 集 成			
*	3	DA 80 54 90	Control Panel Ass'y	コントロールパネル集成			
*	4	DA 80 55 20	End Block Ass'y (L)	拍子木集成(左)			
*	5	DA 80 55 30	- do (R)	// (右)			

[※] New Parts (新規部品)

Re No		art No.	Description	on		部	品名	Remarks	Common Model	Markets
*	6 DA	80 55 40	Fore Leg Ass'y	(L)		前 脚	集 成 (左)			
*	7 DA	80 55 50	- do	(R)		,	/ (右)			
* 1	8 DA	80 55 60	Hind Leg Ass'y			後脚	集成			
* !	9 DB	81 62 30	Hind Leg Support			後脚	横柱			
* 10	0 DA	80 56 10	Music Rest Ass'y			譜面	板集成			
1	1 AA	02 11 80	Square Washer			シャー	シ締付金具			
1:	2 AA	81 12 60	Cover			***************************************	蓋		GS2	J
	AA	81 26 00	- do				n		GS2	U, C, G
1:	3 AA	81 14 00	Battery Cover			バッテ	リーカバー		GS2	
* 1	4 AA	81 45 90	Holder, Top Board			受 け	金具			
※ 1!	5 AA	81 46 00	Holder, Stay			ステー	- 受け金具			
* 10	6 AA	81 46 10	D Rack Hinge (I)			Dラッ	ク蝶番(I)	Female		
* 1	7 AA	81 46 30	D Rack Hook			Dラッ	クフック		GS2	
* 18	8 AA	81 46 40	Nut, Leg			脚 用	ナット			
* 19	9 AA	81 46 50	Radiator Griffe			放 熱	グリル			
* 20	0 AA	81 46 70	Hinge, Hind Leg		e.	後脚	横柱蝶番			
₩ 2	1 AA	81 46 80	Angle, Hind Leg			n	アングル			
* 2:	2 AA	81 48 30	Music Rest Holder (I)			譜面板オ	・ルダー (I)			
* 2:	3 AA	81 50 90	CNX Plate			CNX	プレート	,		
※ 2	4 AA	81 51 00	CNP Plate			CNP	プレート			
× 2	5 AA	81 68 80	Music Rest Bushing			譜面板	ブッシュ			
* 20	6 BB	80 16 10	Hinge, Top Board			屋桩	と 蝶 番			
※ 2	7 BB	80 16 20	Caster			キャ	スター			
2	8 CB	00 58 30	Bushing		0	ブ ッ	シュ			
29	9 CB	01 06 40	P Nut			P ナ	ット			
.30	0 СВ	01 85 90	Keyboard Stopper			鍵盤	受け	Top Board Screw Guide		
3	1 CB	81 42 40	Battery Case			バッテ	リーケース		GS2	
3:	2 CB	81 29 20	Stopper			グリッ	プ型止め輪			
* 3	3 CB	81 83 30	Plastic Screw	4 x 16	BL	プラスチッ	ック製化粧ネジ			
₩ 3	4 CC	02 18 50	Felt		BL	フ ェ	ルト			
₩ 3!	5 CC	02 18 60	- do		BL.		11			
* 3	6 NA	80 69 60	Circuit Board A # 8609			A シ	<u> </u>		GS2	
* 3	7 NA	80 70 60	- do PN-CNB # 8	614		PN-CNE	3 シート			
₩ 3			Power Supply Unit			電源	ユニット			J
*	NB	81 72 20	– do. –	·			n ·			U, C
*		81 72 30	- do				"			G
* 3			Stay Ass'y			ステ	- Ass'y			
* 40		00 00 70		x P1.25 x 75	BL	ボ	ルト			
4			Pan Head Screw	M3 x 20	BL	ナベ	小 ネ ジ			
4:		34 01 20	– do. –	M4 x 12	BL		"			
4:		04 01 40	Bind Screw	M4 x 14	Ye	バイン	/ド小ネジ	17		
4		33 00 60	– do. –	M3 x 6	BL		"			
4!		·	Pan Head Screw	M5 x 155	BL		ベルネジ			
40			Truss Head Tapping Screw		Ye		ッピングネジ			
4			Bind Tapping Screw	3.5 x 14	Ye	バインド	タッピングネジ			
41		33 01 20	- do	3 x 12	BL		"			
49		33 51 20	- do	3.5 x 12	BL		"			
50		33 51 40	_ do	3.5 x 14	BL		11			
5			Bind Tapping Screw	4 x 16	BL		タッピングネジ			
52			Flat Head Tapping Screw		Ye	皿タッ	ピングネジ			
53		33 51 60	- do	3.5 x 16	BL		"	2.		
54			Flat Head Wood Screw	4.1 x 32	Ye	木				
5	5 EV	20:31:00	Flat Washer	φ 10	BL	平	座 金			

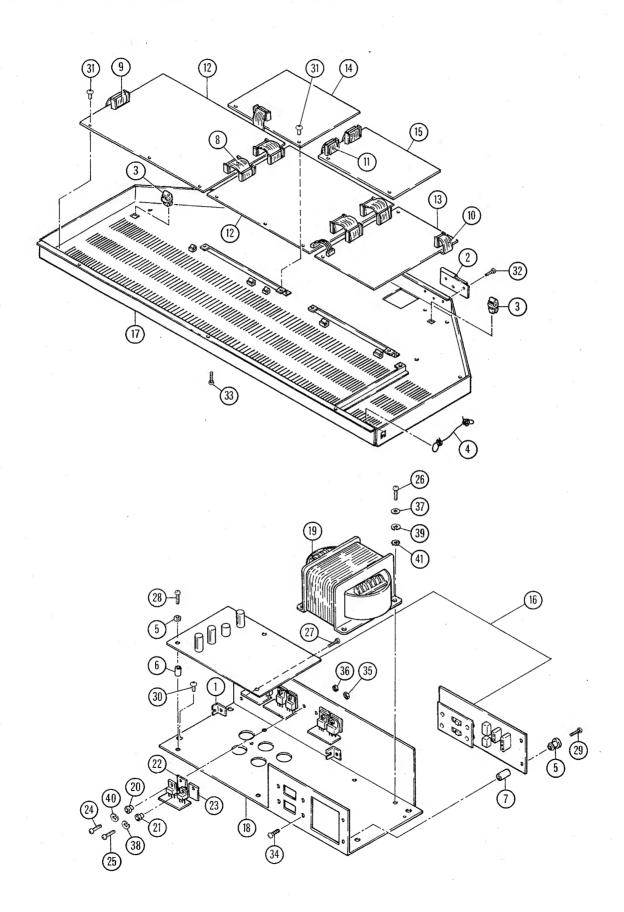
※ New Parts (新規部品)

C. Pedal Assembly (ペダルAss'y)



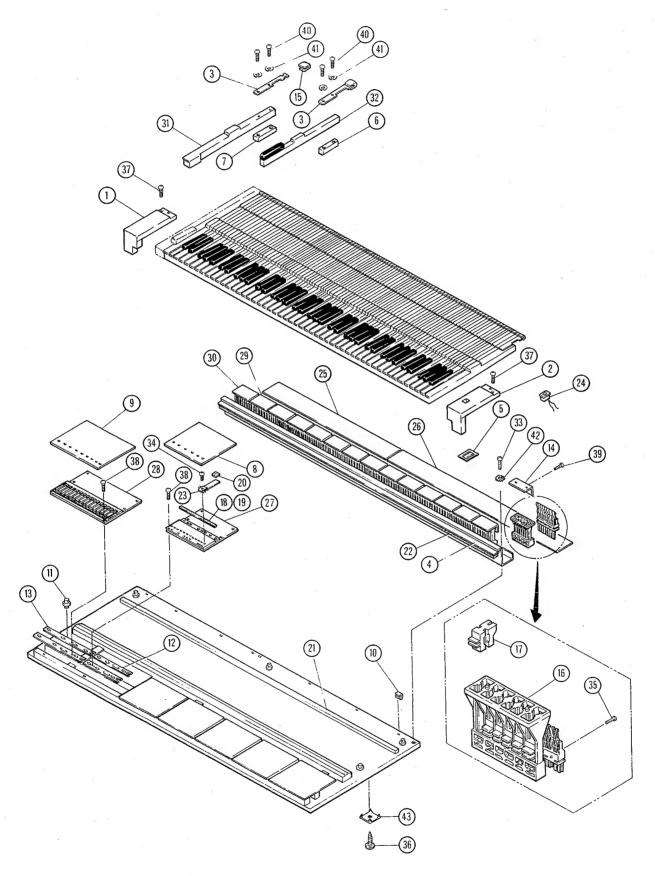
Ref. No.	Part No.	Description		部	品名	Remarks	Common Model	Market
	DA 80 55 80	Pedal Case Ass'y		ペダル	レ 柱 集 成			
1	DA 80 55 90	Bottom Beam Ass'y			持竿集成			
2	DA 80 56 00	Pedal Box Ass'y		ペダル	箱集成	0.		
3	DB 81 62 50	Bottom Beam Cover		ペダル	持 竿 蓋			
4	DB 81 63 20	Front Board, Pedal Box		ペダル	お 前 板			
5	DB 81 63 30	Bottom Board, Pedal Box		ペダル	箱底板	*		·
6	AA 81 46 90	Pedal Pipe		ペダル箱	吊りパイプ			
7	NB 81 62 30	Pedal (L)		ペダ	ル (左)			
8	NB 81 62 40	-do (C)		"	(中)			
9	NB 81 62 50	– do. – (R)		"	(右)			
10	AA 81 47 00	Pedal Pipe Washer		飾りワ	ッシャー			
11	CB 81 70 50	Pedal Pipe Bushing		ペダルパ	イプブッシュ	7		
12	EX 00 00 90	Pedal Pipe Nut 15 x	P1	軸受用	ナット			
13	AA 81 47 10	Music Rest Holder (II)		譜面板ホ	ルダー(II)			
14	CC 02 18 50	Felt	BL	7 x	ルト			
15	AA 81 51 20	Pedal Ass'y Fixing Plate		ペダルA	ss'y取付板			
16	AA 81 51 30			ペダ	ルバネ		_	
17	AA 81 51 40	Pedal Stopper		ペダルン	ストッパー	*		
18	AA 81 51 50	Pedal SW Fixing Plate		ペダル:	SW取付板			
19	AA 81 51 60	Pedal Shaft Holder		ペダ	ル 軸 受			
		Pedal Shaft Bushing		ブッ	<u>ئ</u> ء			
21	NB 03 70 40	Tablet Switch		タブレッ	トスイッチ	×		
22	AA 03 44 70	Hinge		蝶	番			
23	AA 81 51 10	I/O Chassis		1/0 シ	ャーシ			
24	LB 20 18 20	AC Inlet 2P C-20	9	2 P イ	ンレット		GS2	
25	LB 30 01 60	Cannon Socket XLR	3-32	キャノ:	ンソケット			
26	LB 10 04 70	Jack JL2A		ジャ	ック			
27	MG 00 10 30	AC Cord	-	電源	コ - ド			J
	MG 00 10 40	– do. –			#			U
	MG 00 10 50	– do. –		-	`11			G
	MG 00 11 20	– do. –			"			С
28	EX 00 00 80	Bolt M10 x P1.25 x 1	00 BL	ボ	ルト			
29	EA 03 00 60	Pan Head Screw M3 x	6 Ye	ナベ	小 ネ ジ			
30	EA 03 01 00	— do. — МЗ х	10 - do	,	11			
31	EA 04 00 60	– do. – M4 x	6 – do. –		11			
	EA 04 01 80	– do. – M4 x	18 — do. —		n			
	EA 34 01 00		10 BL		n ,			
		Flat Head Screw M3 x	6 — do. —	血小	ネ ジ			
	EB 33 01 80		18 – do. –		11			
			6 – do	丸皿	小 ネ ジ			
			14 Ye	バインドタ	ワッピングネジ			
		Pan Head Tapping Screw 3 x 1		ナベタッ	ピングネジ			0
		Flat Head Tapping Screw 3 x 1	2 — do. —	皿タット	ピングネジ			
	EO 33 51 60		16 — do. —		11			
	EV 20 00 40	Flat Washer $\phi 4$	Ye	平	座 金			
	EV 20 01 60	– do. –			n			
	EV 20 31 00	- do, - φ10	BL		"			
		Spring Lock Washer φ3	Ye	バネ	座 金	•		
	EV 30 00 40	– do. –	– do. –		II .			
46	LX 20 00 10			特殊	平 座 金			
	1 2 20 200 201	Hexagonal Nut M9		杜	角ナット	-		
47	LA 20 00 20	Trexagonarivut 1019		17 74 /	<i>A 1 2 F</i>			

D. D Rack & Power Supply Unit (Dラック及び電源ユニット)



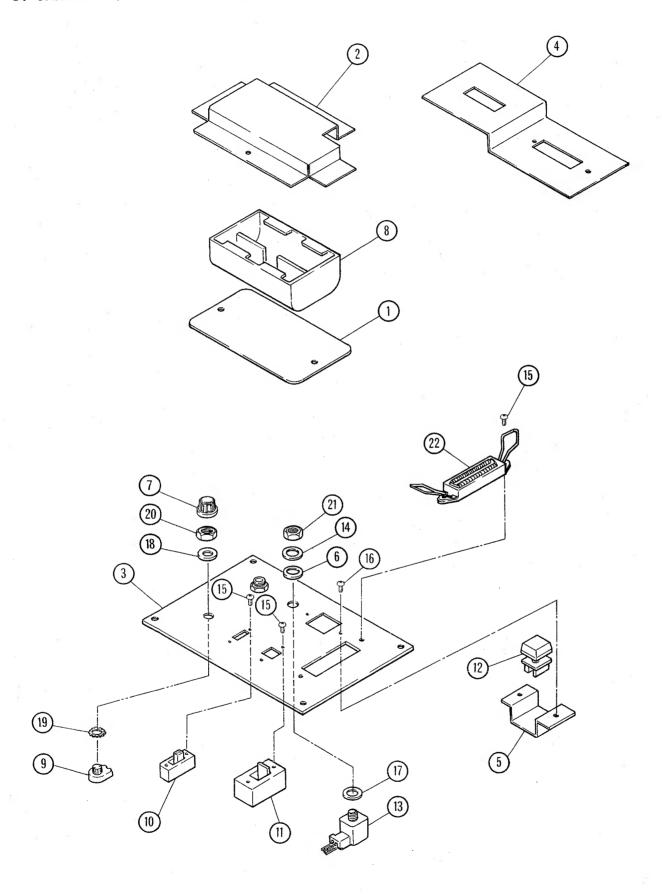
Ref.							Common	
No.	Part No.	Descript	ion		部品名	Remarks	Model	Markets
1	 	P.C.B. Catcher			シートキャッチャー			
2	 	D Rack Hinge (II)	-		D ラック蝶番(II)	Male		
	C B 81 70 60				PCB ホルダー	* .		
	C B 81 70 70				ラックロープ			
5	C B 81 70 90	Bushing, P.C.B. Spacer			ワンタッチブッシュ			
6	С В 81 73 90	P.C.B. Spacer			ワンタッチカラー			
7	CB 81 74 00	- do			n n			
8	MZ 80 85 50	Flat Cable Ass'y	FM		FM 線 材 キ ッ ト		GS2	
9	MZ 80 85 60	- do	MPX		MPX "			
10	MZ 80 85 80	do	TD ·		TD "		GS2	
11	MZ 80 85 90	- do	RW		RW "	** * *** · · · · · · · · · · · · · · ·		
12	NA 80 69 20	Circuit Board	FM #8605		FM シ ー ト		GS2	
13	NA 80 69 30	- do	KC #8606		кс シ — ト	***************************************	GS2	
14	NA 80 69 40	– do. –	MPX #8607		MPX シート			
	NA: 80:69:50	- do	RW #8608		RW シ − ト			
	NA 80 70 10	– do. –	DC #8615		DC > - 1	0		J
	NA 80 74 40	- do	DC #8615		"			U, C
	NA 80 74 50	- do	DC #8615		" "			G
17	NB 81 59 90	D Rack			D ラック		_	
	NB 81 61 70				電源ユニット			J
	NB 81 72 20	- do			11 11			U, C
	NB 81 72 30	do		<u>:</u>	"			G G
19	NB 81 74 00	Power Transformer Unit			電源トランスユニット			<u> </u>
	C B 07 28 80	Insulation Bushing						
	i L 00 04 00	- do			絶縁ブッシュ			
	i L 00 04 00	Mica Base		·	"			
	i L :00:04:60	- do			マイカベース			
	EA 02 60 80	Pan Head Screw	140.0		"			
24	EA 03 00 80	- do		Ye	ナベ 小 ネ ジ	0		
25	EA 04 00 80	- do	M3 x 8	Ye	"			
26				Ye				
27	ED 03 00 60 ED 03 02 00	– do. –	******	Ye	バインド 小 ネ ジ		_	
28				Ye				
29	ED 03 02 50	- do		Ye	"			
30	ED 04 01 40			Ye	"		<u> </u>	
31	ED 33 00 60	- do		BL	n n			
32	ED 34 00 60	do		BL	"			
33	ED 34 01 00	do		BL	. "			
34	E i 02 61 00			Ye	バインドタッピングネジ			
35	EV 10 00 30	Hexagonal Nut	M3		六角ナット			
36	EV 10 02 60	- do	M2,6		"			
37	EV 20 00 40		φ 4		平 座 金			
38	EV 30 00 30	Spring Lock Washer	φ3		バネ座金			
39	EV 30 00 40	- do	φ 4		"			
40	EV 30 02 60	do	φ 2.6		"			
41	EV 42 00 40	Toothed Lock Washer	B4S		歯 付 座 金			
		• • • • • • • • • • • • • • • • • • • •	***************************************					
	1.9							
								-
		*				. 1	1 1	
	- + + + +	· · · · · · · · · · · · · · · · · · ·			····			

E. Keyboard Assembly (鍵盤)



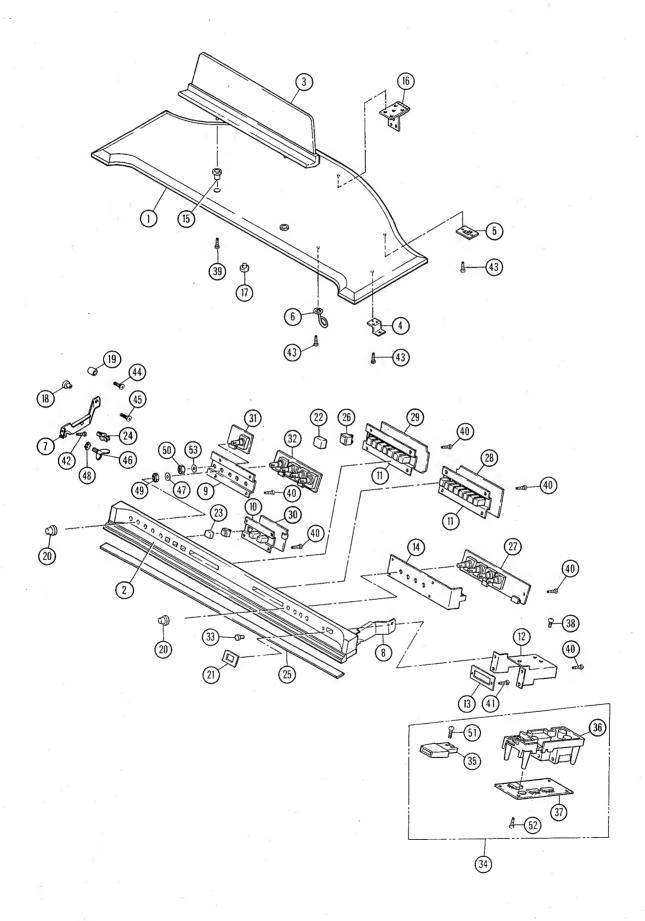
Ref. No.	Part No.	Descript	ion		部	<u>a</u>	名	Remarks	Common Model	Market
1	DA 80 55 20	End Block Ass'y	(L)	拍	子オ	集品	戊 (左)			
2	DA 80 55 30	– do. –	(R)		,	ı	(右)			
3	AA 81 49 80	Actuator Plate		7	クチュ	- タ	駆動板		GS2	
4	AA 81 50 70	Switch Rail					ール			-
5	B B 80 16 80	Stopper Ring, SW		7	イッ	チ业	め輪			
6	B F 00 00 10	Key Weight		+	– F	ד ל	- F	Black Key	GS2	
7	B F 00 00 20	- do				"		White Key	GS2	
8	CA 80 23 70	Dust Proof Cover	PC-1	P	D-1 防	塵シ	-			
9	CA: 80 23 80	- do	PC-2	P	C-2 防	塵シ	- h			
10	C B 03 54 00	P.C.B. Support		P	CB #	ポ	- F			-
11	C B 08 70 00	P.C.B. Holder		シ	- h	ホル	ダー			
12	C B 81 72 80	PC-1 Film		P	0-1 7	7 1	ルム			***************************************
13	C B 81 72 90	PC-2 Film		P	C-2 7	7 1	ルム			*****
14	C B 81 73 00	Contact Cover		接	点	カ・	/ ′ –	,		
15	C B 81 73 60	Actuator Plate Cap	*	駆	動板	+ +	ップ		GS2	
16	C B 81 73 70	Actuator Guide		7	クチュ	- タ	ガイド		GS2	
17	C B 81 73 80	Actuator		ア	2 -	≠ ェ	- 9		GS2	
18	C C 01 46 30	PC-1 Stopper Felt		P	C-1スト	ッパー	フェルト			
19	C C 01 46 40	PC-2 — do. —		P	C-2	"			1	
20	C C 03 04 80	Sensor Lever Felt		セ	ンサーロ	レバーフ	フェルト			
21	C C 07 04 10	Key Back Rail Felt		ス	トッパ	ーフェ	ルトI			
22	CD 07 02 30	Keyboard Stopper Felt		ス	トッパ	ーフェ	ルトII	-		
23	iT 43 90 00	IC	PSA439	1			С			
24	KA 10 09 40	See-Saw Switch		1	源 :	スイ	ッチ	Power		
25	NA 80 69 70	Circuit Board	MK1 #8610	М	K1	シ -	- F			
26	NA 80 69 80	- do	MK2 #8611	·M	K2	シ -	- ŀ			
27	NB 81 61 20	PC-1 Unit	*	P	C-1 =	<i>L</i> =	ット	12 Key		
28	NB 81 61 30	PC-2 Unit		P	C-2 =	L =	ット	16 Key		
29	NB 81 61 50	Key Switch Unit I		7	イッチ	ユニッ	h I	6	GS2	
30	NB 81 61 60	do II	•		,	,	′ II	. 4	GS2	0
31	NX 80 01 40	White Key Ass'y	C	白	4	建	Ass'y			· · · · · · · · · · · · · · · · · · ·
	NX 80 01 50	- do	D			"				
	NX 80 01 60	do	E			<i>n</i> ·				
	NX 80 01 70	- do	F			'n		*		
	NX 80 01 80	do	G			"				
	NX 80 01 90	do	A			"			1 1	· · · · · · · · · · · · · · · · · · ·
-	NX 80 02 00	- do	В			"				· · · · · · · · · · · · · · · · · · ·
	NX 80 02 10	– do. –	A'			"		1A		
	NX 80 02 20	- do	C'			//		88C		
32	NX 80 02 30	Black Key Ass'y		黒	\$	建	Ass'y			
33	EA 04 01 20	Pan Head Screw	M4 x 12 Y	e ナ	~:	小	ネ ジ			
34	ED: 02:60:60	Bind Screw	M2.6 x 6 Y	e /			ネジ			-
35	ED 03 02 50	- do	3 x 25 Y	e		"				
36	EG 35 03 00	Pan Head Screw	M5 × 30 B		先ナ	ベ小	ネジ			
37	EH 04 02 50	Truss Head Tapping Screw					グネジ			
38	Ei 03 01 40	Bind Tapping Screw	3 x 14 Y	e /	インド	タッピ	ンネジ			
39	E i 03 01 60	do	3 x 16 Y	e		11				
40	E i 04 03 50	- do	4 x 35 Y	e		"				
41	(Spring Lock Washer	φ4 Y		ネ	座	金	×		
42		Toothed Lock Washer	A4S Y		付	座	金			
43		Square Washer			100		1 金.具			
										

F. CNX Plate (CNX プレート)



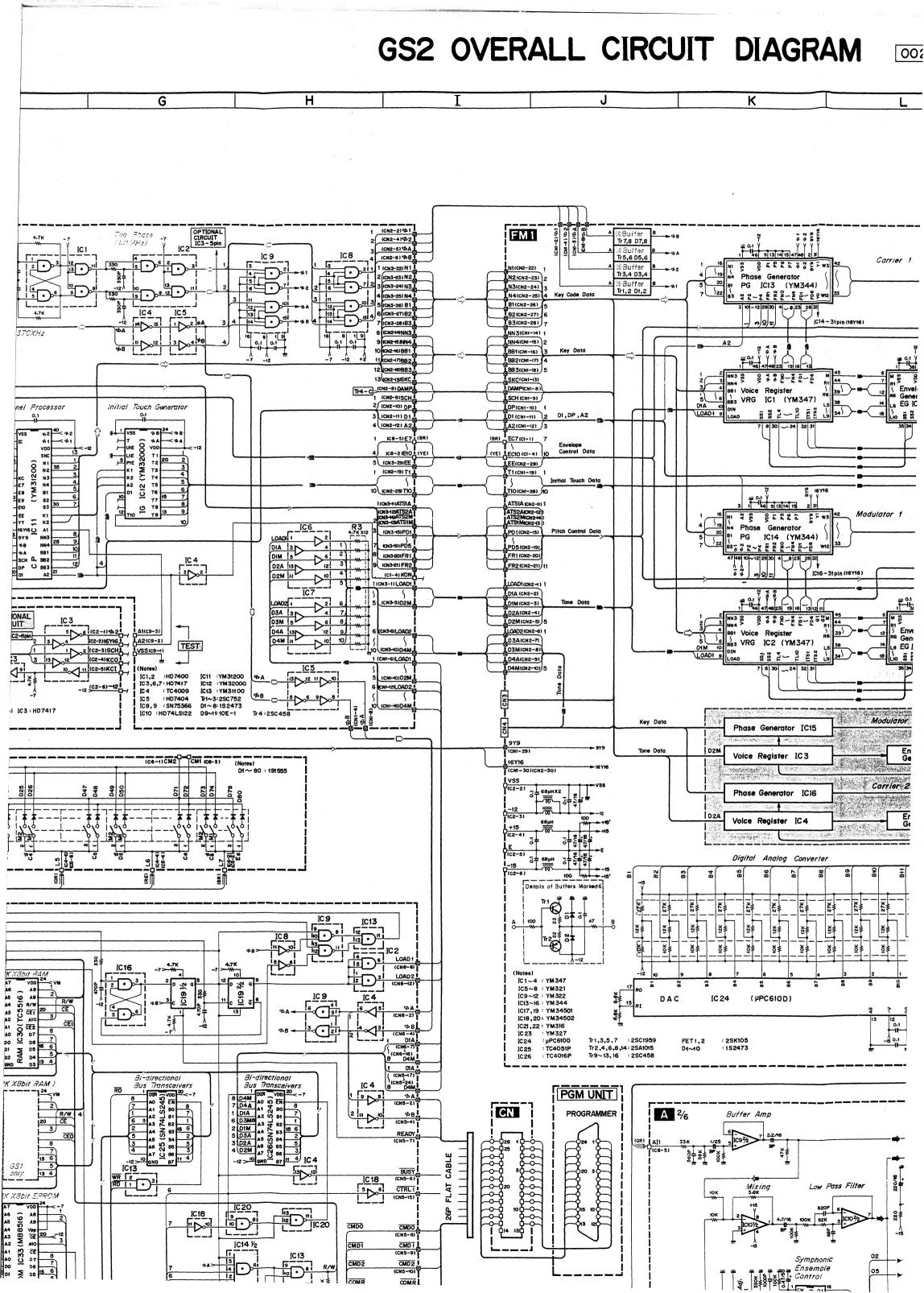
Re ⁻ No	- 1	Pa	rt l	No.		Description	on	,	部	品	2	i .	Remarks		Common Model	Markets
1	1 /	٩A	81	12	60	Cover				蓋					GS2	J
	1	٩A	81	26	00	do	0.0			"					GS2	U, C, G
2	2 /	AΑ	81	14	00	Battery Cover	*	バ	ッテ	1) -	ーカ	バー			GS2	
3	3 /	AA	81	50	90	CNX Plate		CN	IX 7	ر ا	レ・	-				ia .
4	1 /	AA:	81	51	00	CNP Plate		CN	IP 7	7 1	ν·	— Г				
5	5 /	AA:	81	64	20	Switch Angle		ス	イッ	チフ	アン	グル				
	\rightarrow					Insulation Nut		絶	縁	ナ	''	,				
						Knob		ッ		マ			Pitch			
8	3 (СВ	81	42	40	Battery Case		電	池	ケ		· ス			GS2	
			-			Variable Resistor	Β5ΚΩ	可	変	抵	扐	ī 器	Pitch			
10	0 1	KA.	40	05	00	Slide Switch		ス	ライ	۲ <i>ز</i>	スイ	ッチ	Line Out			
		KA				- do				"			PGM Lock			
						Push Switch		プ	ッシ		スイ	ッチ	Store			
		LB :						ジ	ヤ		ッ		Foot SW. Phones			
	_		:			Flat Washer	φ9	 特				金金				
						Pan Head Screw	M2.5 x 6 BL					・ジ				
		EΑ				- do	M3 x 6 — do. —			<u>'</u> ''						
						Fiber Washer		ヮ.	ァイバ			シャー				
						Flat Washer	φ7					至金				- mg.v.
						Toothed Lock Washer	φ7 A7S	歯	· /本		座	金				·
						Hexagonal Nut	M7					ット				
		EZ				- do	M9	79	/ * /	"		<u> </u>				
						Connector	24P		ネ		ク	9	CNX. CNP			
- 2	_	LB :	OU:	33	00	Connector	241						, CIVA, CIVE			
-	\dashv	\dashv	_							-						
<u> </u>	\dashv					*	s ()									
<u> </u>	-										- ;					
L	-		_													
ļ	-	_													ļ	
ļ	-		_													
<u> </u>	-	_														
<u> </u>	_						(***									
<u> </u>	_			_												
<u> </u>	_					-										
	\perp														 	
<u> </u>	_		_			Julius III									 	
	_												-			
_	\downarrow												ļ			
_	_															
	_					* * * * * * * * * * * * * * * * * * *										
	4					with the second										
	\perp			_												
	\perp					w										
<u></u>		i														
						*										
L																
Г																
							*					a				
Γ	1											1				
Г	\exists	-								*.	,			00		
	T						· · · · · · · · · · · · · · · · · · ·									
1													+			

G. Control Panel & Top Board Assembly (コントロールパネル及び屋根)



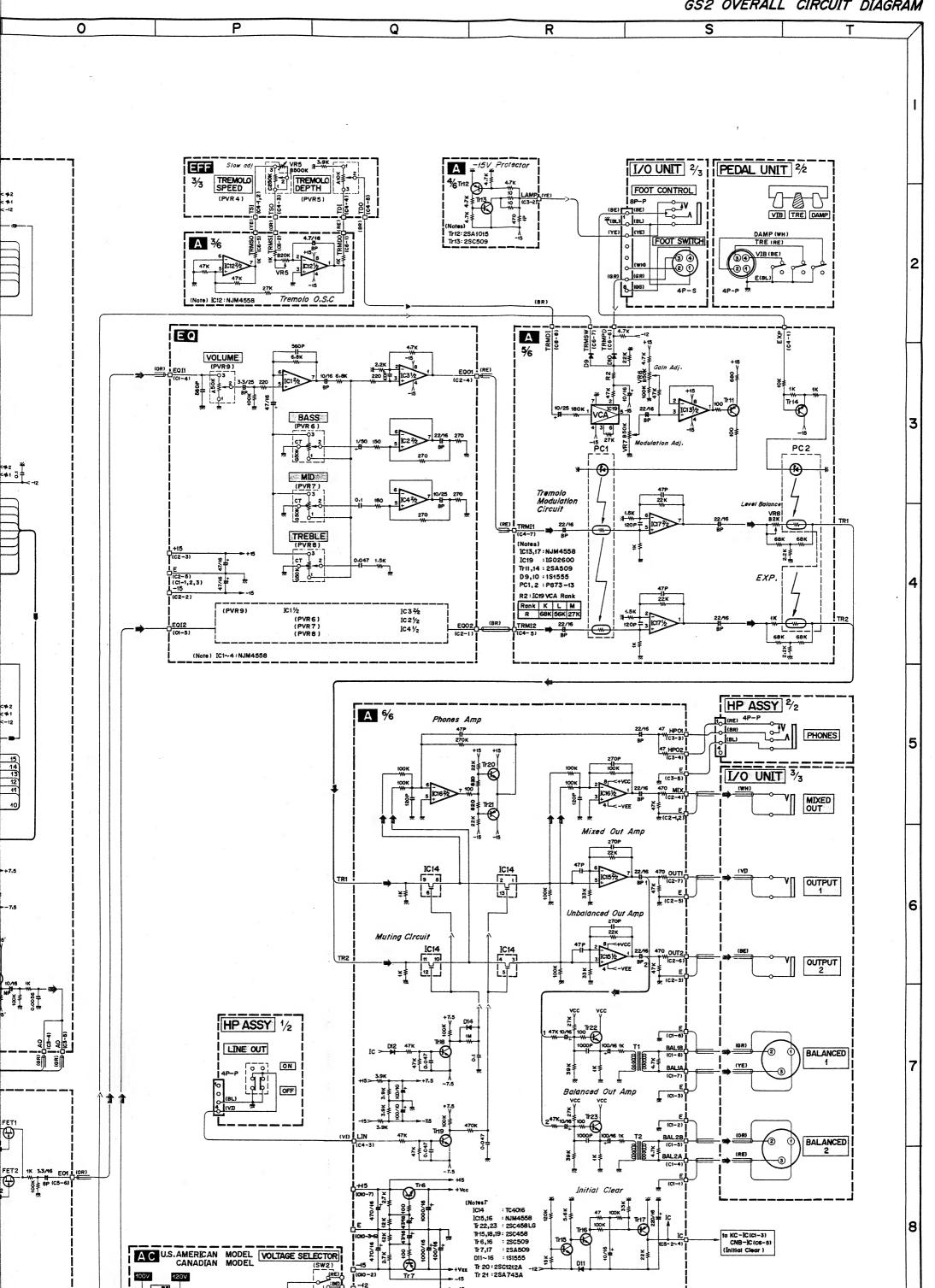
	Ref. No.	Part No.	Description		部品名。	Remarks	Common Model	Markets
*	1	DA 80 54 20	Top Board Ass'y		屋根集成			
*	2	DA 80 54 90	Control Panel Ass'y		コントロールパネル集成・			
*	3	DA 80 56 10	Music Rest Ass'y		譜面板集成		0	
*	4	AA 81 45 90	Holder, Top Board		受 け 金 具	-		
*	5	AA 81 46 00	Holder, Stay		ステー受け金具			
*	6	AA 81 46 30	D Rack Hook		D.ラックフック		GS2	
*	7	AA 81 48 90	Control Panel Rotary	(L)	パネル回転金具 (左)			
*	8	AA 81 49 00	– do. –	(R)	" (右)			
*	9	AA 81 49 10	VR Angle		ボリュームアングル			
*	10	AA 81 49 20	SW Angle I	-	スイッチアングル 1			-
*	11	AA 81 49 30	- do II		" II			
*	12	AA 81 49 40	Holder, Card Reader		リーダーホルダー			
*	13	AA 81 51 80	Plate, C/R Escutcheon		エスカッションプレート			V
*	14	AA 81 64 60	EQ Plate		EQ プレート			
*	15	AA 81 68 80	Music Rest Bushing		譜 面 板 ブ ッ シ ュ		7	
*	16	B B 80 16 10	Hinge, Top Board		屋根蝶番			
-	17	CB 00 20 50	Rubber Button	BL	ゴムボタン			
Ī	18	C B 00 58 30	Bushing		ブッシュ			
	19	C B 00 65 40	Rotary Stopper		回転止め			
	20	C B 80 84 00	Knob		ツマミ	VR, Switch		
*	21	CB 81 71 00	Card Reader Escutcheon		リーダーエスカッション			
*	22	CB 81 71 10	Switch Button -1		スイッチボタン			
*		CB 81 71 20	− do. − -2		"			
*		CB 81 71 30	- do3		"			
*		CB 81 71 40	- do4		"			
*		CB 81 71 50	– do. – -5		. "			
*		CB 81 71 60	do6	-	"			
*		CB 81 71 70	do7		" "			
*		CB 81 71 80	– do. – -8		"			
*		CB 81 71 90	do9		"			
*		CB 81 72 00	− do. − -10		"			
*		CB 81 72 10	– do. – -1 1		"			
*		CB 81 72 20	− do. − -12	*	"			
*		CB 81 72 30	- do13		11			
*		CB 81 72 40	– do. – -14		"			
*		CB 81 72 50	- do15		"	,		
*		CB 81 72 60	– do. – -16		"			
*	23	CB 81 72 70	Push Button		プッシュボタン			
*	24	CB 81 74 20	Top Board Stay Holder		ロッドホルダー			
*	25	C C 01 46 20	Felt	BL	フェルト			
	26	KA 90 17 20	Push Switch		プッシュスイッチ			
*	27	NA 80 70 20	Circuit Board PN-EQ	#8614	PN-EQ シート			
*	28	NA 80 70 30	- do PN-SEL-R	#8614	PN-SEL-R シート			
*	29	NA 80 70 40	do PN-SEL-L	#8614	PN-SEL-L シート			
*	30	NA 80 70 50	– do. – PN-TET	#8614	PN-TET > - 1		1 .	
*	31	NA 80 70 70	- do PN-DEF	#8614	PN-DEF シート			
*	32	NA 80 70 80	- do PN-EFF	#8614	PN-EFF シート			
	33	NB 04 89 90	LED Unit		LED ユニット	Pilot Lamp	T 1	****
*	34	NB 81 60 60	Card Reader Unit	PCR-303S	カードリーダーユニット		GS2	
*	35	NX 80 01 30	Guide, Card Reader	K03-0007	カードリーダー挿入口		GS2	
*	36	NX 80 01 10	Mech. Unit, — do. —	K90-0799	メカユニット	-	GS2	
*	37	NX 80 01 20	Circuit Board, C/R	K90-0711	C/R シ - ト		GS2	
-	>% N1	ew Parts (新規部	¬ \			-		

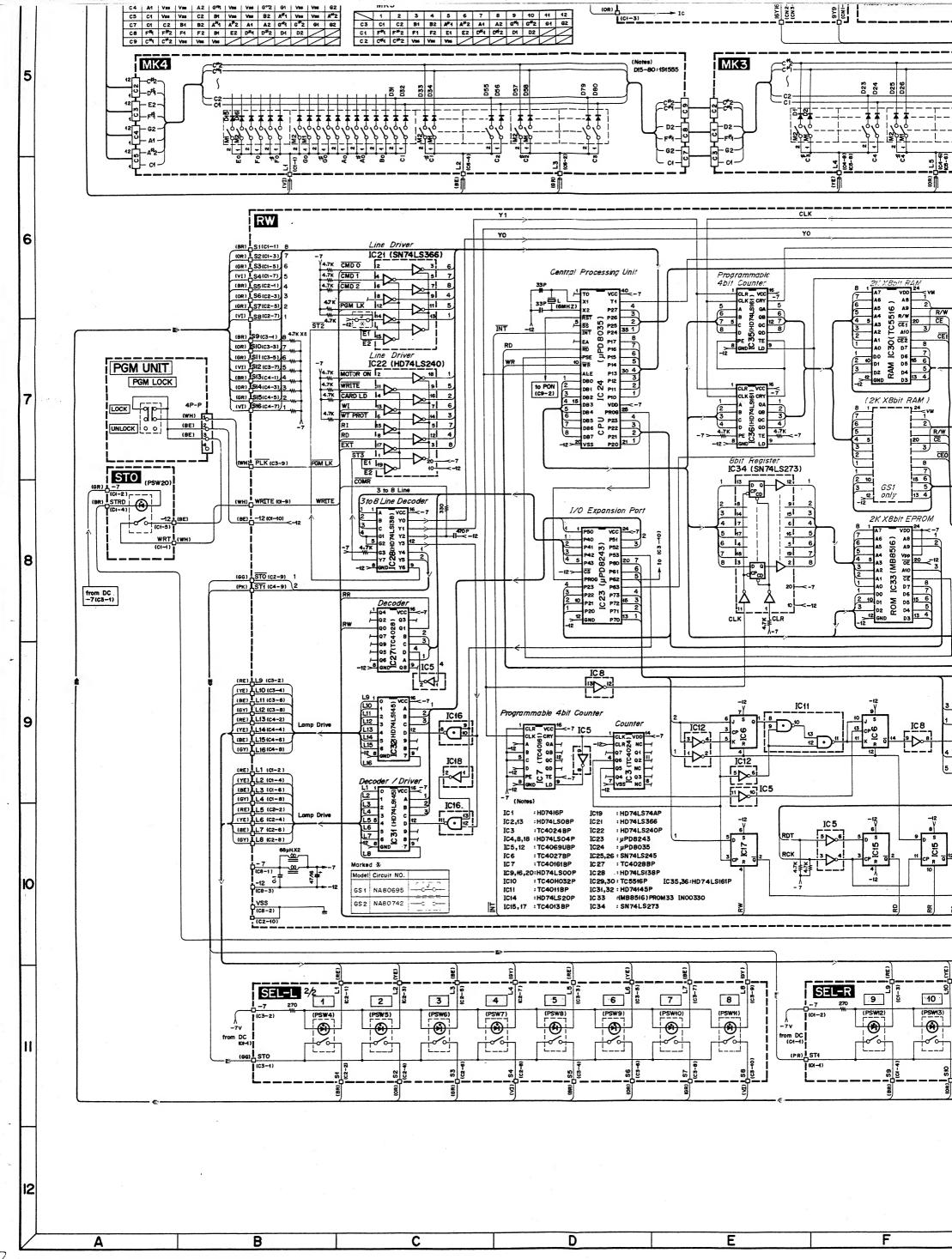
Ref.				7					**	- 12	_	-	*	Common	
No.			No.		Description				部				Remarks	Model	Markets
38					Bind Screw	M3 x 5	BL	/\` ·	イン	۴ <i>ا</i>	小 ネ	<u>ッ</u>		,	
39	ED				- do	M3 x 10	BL	ļ		"					
40					Bind Tapping Screw	3 x 10		バイ	ンドタ	ッヒ	ング	ネジ	, ,	ļ	
41	Εi				- do	3 x 12				"				-	
	Εi				do	3.5 x 12				"					
	Εi				- do	4 x 16	BL	ļ		"					
	•		_		Flat Head Wood Screw	4.1 × 20			木		ネ	ジ			
	EP				- do	4.5 x 25				"				-	
					Wing Bolt	M5 x 10	Ye	蝶	ボ		ル .	<u> </u>		1	
	1		<u> </u>		Flat Washer	φ7			殊			金			
					Toothed Lock Washer	AB5S	Ye	歯	付		座				
					Hexagonal Nut	M7		特	殊六	角	ナッ	<u>'</u>		-	
	ΕZ				do	M9				"				1	
						× 5 XA4-72		夕 :			トオ	ジ			
52	EX			1		.6 x 6 E09-26	50002			"					
53	LX	20	υ0	10	Flat Washer	φ9		特	殊	平	座	金			
<u> </u>		_		_										<u> </u>	
	i	_		_										 	
														-	
ļ				_										\bot	
ļ	\sqsubseteq			_											
				_			_								
	;			_											
					*										
	<u>_</u> i							ļ							
<u> </u>	<u> </u>			\Box											
	<u> </u>													l	
				_	· · · · · · · · · · · · · · · · · · ·		_								
		- 1												-	
<u> </u>				_											
ļ														1	
	-			\dashv											
	<u> </u>			_											
<u> </u>															
ļ				_											
<u> </u>		_		_		-									
ļ				_					(3)						
 							_							 	
ļ	\vdash			_		***************************************	:		·						
<u> </u>									i.						
-				4		-									
				4			-							1 1	
			7	4					<u>``</u>						
ļ			_					-8-	-						
		_							. 1 -				1		
				4										 	
	<u> </u>			\dashv											
				_		:			- 2						
				_											
				_											
				\dashv											
L					·	,									

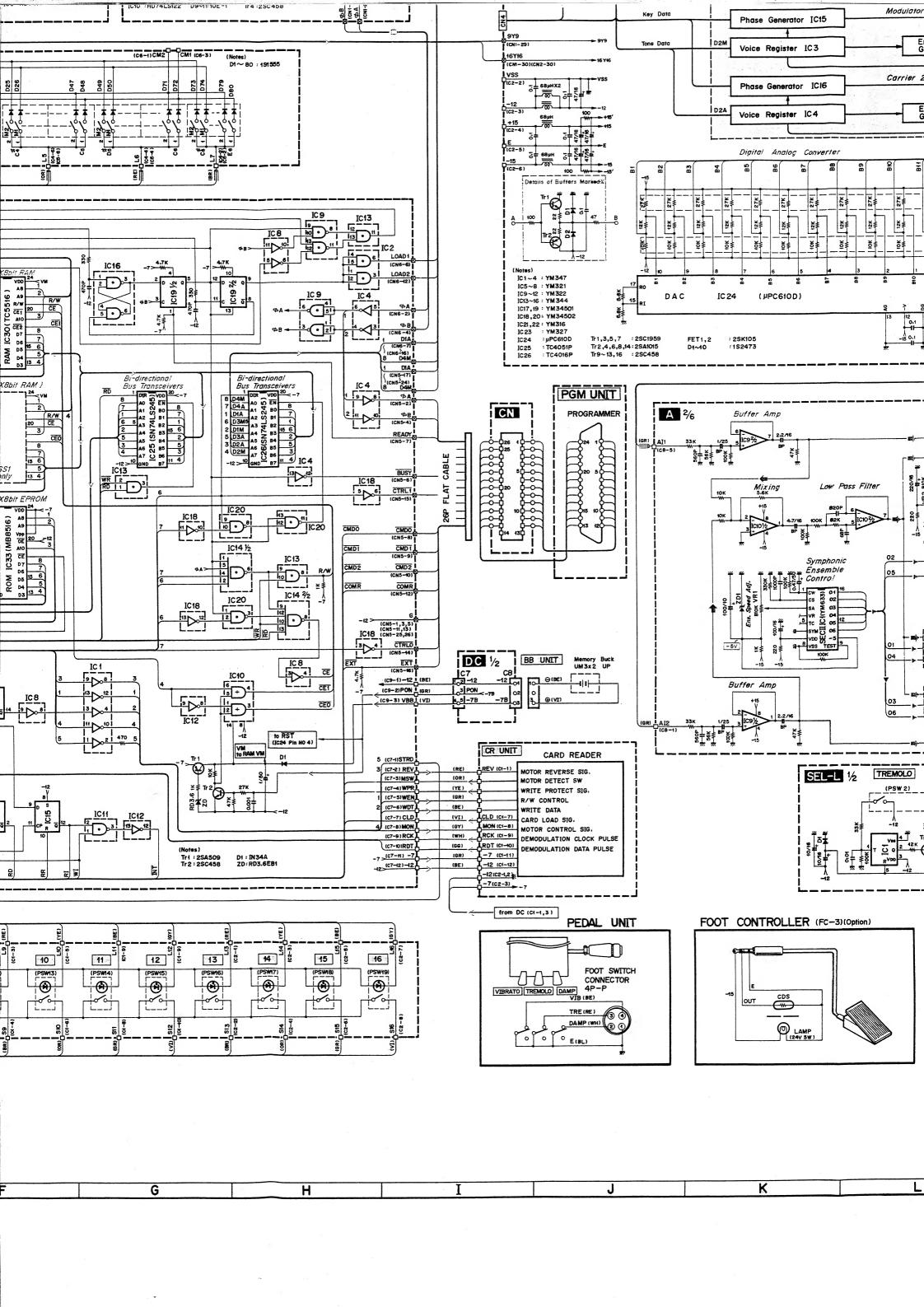


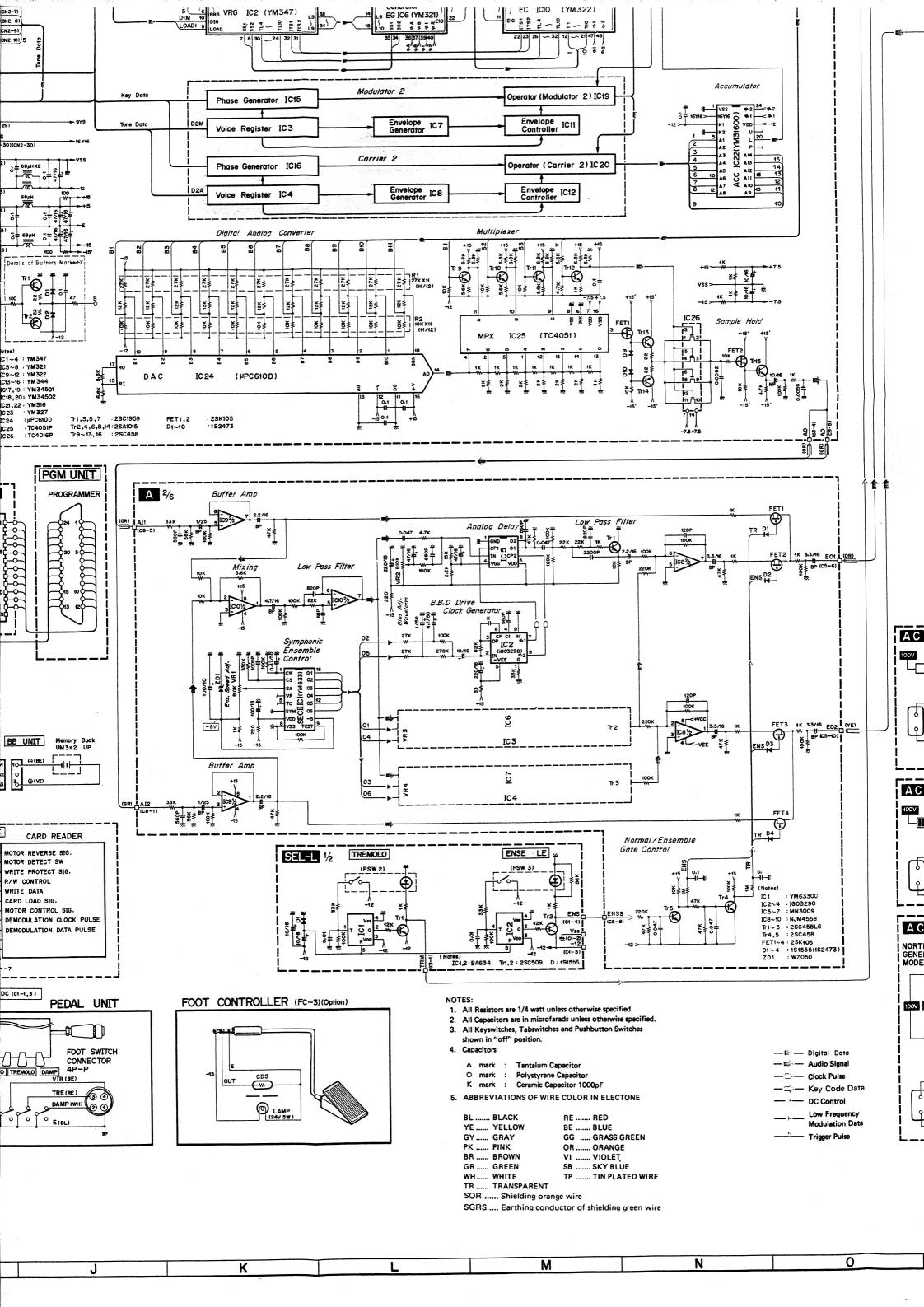
RALL CIRCUIT DIAGRAM 002653 0 ≾8uffer <u>B</u> Tr7,8 D7,8 FM1 Tr 5,6 D5,6 Carrier 1 9 4 5 5 7 7 2 5 × W #16CN2-22) X:Buffer Tr3,4 D3,4 12 (CN2-23) Operator (Carrier) X Buffer Tr1,2 D1,2 OPC IC17 (YM345-1) #34CN2-24) 144CN2-251 314CN2-261 5 5~ 4 E E E E~ F E~ E S wis 32(CN2-27) [C14 - 31 pin (16Y16) 334CN2-281 IN 3(CNI-14) 1 1144(CNI-15) 2 BEH (CN1-16) 382(CN1-17) 383(CNI-18) ATS1 ATS2 ATS2 EC: Con Voo Voo PAA SICC(CN1-13) 881 Voice Register SCH (CNI-9) 883 VRG IC1 (YM347) IC9 (YM322) EC EG IC5(YM321) \$\$2 \$\$2 71.4 71.10 71.10 1751 1752 552 552 01 07 DI, DP, A2 DE (CN1-11) 2 A24CN1-12) 3 EC7(CI-1) 7 Envelope Control Data EC10 (C1-4) (C EEECN2-291 T16CN1-191 T104CH1-28) 10 Adder ATSIA (CN2-11) 1 TS2ACN2-12 TS2McN2-14 TS1McN2-13 Modulator 1 9 4 6 Phase Generator Operator (Modulator) Pitch Control Date PD1 (CN2-15) PG IC14 (YM344) OPM IC18 (YM345-2) PD5 (CN2-19) 2 2 2 ~ 4 E E E & ~ 7 E ~ 6 FR2 (CN2-21) IC16 - 31 pin (16Y16) LOADICN2-1) 1 DIA (CN2-2) DIM (CN2-3) DZA(CN2-4) V90 D2M (CN2-5) 5 OAD2(CN2-6) Envelope Envelope Controller REG [C6 (YM321) D3AICN2-77 EC ICIO (YM322) D3M(CN2-8) 5\$\\ 5\$\\ 7\\ 7\\ 1124 17\$\\ 1 D4A(CN2-9) Accumulator Modulator 2 Key Data Phase Generator IC15 Operator (Modulator 2) IC19 Envelope ICtt Tone Data DZM Voice Register IC3 16Y16 Phase Generator IC16 Operator (Carrier 2) IC20 AIL ACC Envelope IC8 Voice Register IC4 Digital Analog Converted **(**) € ĕ ğ≱ IC 26 FET1 1 € IC1~4: YM347 IC5~8: YM321 IC9~12: YM322 IC13~16: YM344 IC17,19: YM34501 **3**6N DAC IC 24 (PPC610D) IC18,20: YM34502 IC21,22: YM316 IC23: YM327 IC24 IC25 : µPC6100 Tr1,3,5,7 : 25C1959 FET1,2 : 2SK105 : TC4051P Tr2,4,6,8,14:2SA1015 Tr9~13,16:2SC458 :152473 IC26 PGM UNIT N PROGRAMMER $A \frac{2}{6}$ Buffer Amp Low Pass Filter 0 TR DI Low Pass Filter ENS D2 8.8.D Drive Z Symphonic Ensemble 05

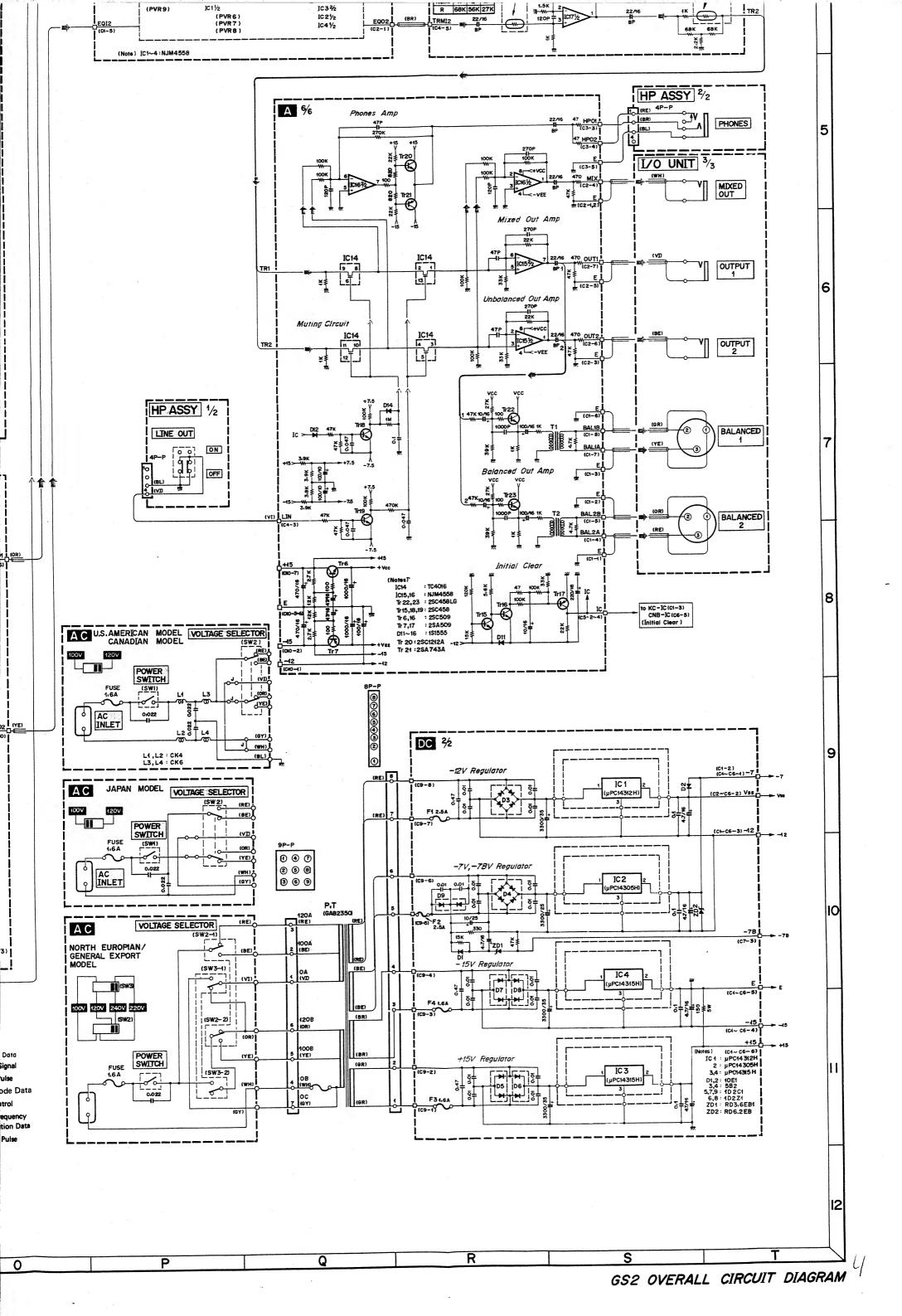
GS2 OVERALL CIRCUIT DIAGRAM











C6

C7

4 - - - - - - - 5 E BL DC-E (C6-5) 6 +15 OR DC-+5 (C6-6)

Pin Pin Wire No. Name Color

C8

Destination

Pin Pin Wire No. Name Color

Pin No.	Pin Name	Wire Color	Destination
1	Vss	BL	EFF-Vss (C2-1)
2	VIB	RE	A-PC0 (C7-2)
3	IC	OR	A-IC (C5-2)
4	-		_
5	-	-	-

C2

Pin No.	Pin Name	Wire Color	Destination
1	φ2	-	_
2	16Y16	-	-
3	SCH	-	-
4	ксо	-	-
5	KCI	-	-
6	-12	_	-

C3

Pin No.	Pin Name	Wire Color	Destination
1	PS1	-	-
2	PS2	_	-
3	DP1	OR	EFF-DP1 (C2-2)
4	DP2	-	-
5	DP3	GR	EFF-DP3 (C2-3)
6	RP1	_	-
7	RP2	_	-
8	RP3	-	-
9	DAMP	WH	FC-P1-6 F/S4P-2
10	_	-	-

C4

Pin No.	Pin Name	Wire Color	Destination
1	L7	SBR	MK3-L7 (C4-2)
2	L6	SRE	MK3-L6 (C4-4)
3	L5	SOR	MK3-L5 (C4-6)
4	L4	SYE	MK3-L4 (C4-8)
5	L3	SGR	MK4-L3 (C6-2)
6	L2	SBE	MK4-L2 (C6-4)
7	L1	s vi	MK4-L1 (C1-1)
В	LO	-	-

C5

Pin No.	Pin Name	Wire Color	Destination
1	C= 2	SBR	MK4-C=2 (C2-12)
2	C=1	SRE	MK4-C=1 (C2-9)
3	02	SOR	MK4-D2 (C2-8)
4	D1	SYE	MK4-D1 (C2-5)
5	D= 2	SGR	MK4-D= 2 (C2-4)
6	0=1	SBE	MK4-D=1 (C2-1)
7	E2	SVI	MK4-E2 (C3-12)
8	E1	SGY	MK4-E1 (C3-9)
9	F2	SWH	MK4-F2 (C3-8)
10	F1	S GG	MK4-F1 (C3-5)
11	F=2	S SB	MK4-F= 2 (C3-4)
12	F=1	SPK	MK4-F= 1 (C3-1)

FM

C1

Pin No.	Pin Name	Wire Color	Destination
1	E7	YE	KC-E7 (C8-5)
2	E8	YE	KC-E8 (C8-4)
3	E9	YE	KC-E9 (C8-3)
4	E10	YE	KC-E10 (C8-2)
5	_	_	-

C2

Pin No.	Pin Name	Wire Color	Destination
1	-	-	-
2	Vss	BL	DC-Vss (C5-2)
3	-12	BE	DC12 (C5-3)
4	+15	OR	DC-+15 (C5-6)
5	E	BL	DC-E (C5-5)
6	-15	8R	DC15 (C5-4)

СЗ

Pin No.	Pin Name	Wire Color	Destination
1	E	-	_
2	E	SGRS	
3	Ε	SBES	
4	AO	SGR	A-A[1 (C8-5)
5	AO	SBE	A-AI2 (C8-1)

CN No.	CN Name	Destination
CN1	30P FLAT CABLE	(to KC-CN2)
CN2	20P FLAT CABLE	(to KC-CN3)

RW

Pin No.	Pin Name	Wire Color	Destination
1	S1	BR	SELL-S1 (C2-2)
2	L1	RE	SELL-L1 (C2-1)
3	S2	OR	SELL-S2 (C2-4)
4	L2	YE	SELL-L2 (C2-3)
5	S3	GR	SELL-S3 (C2-6)
6	L3	BE	SELL-L3 (C2-5)
7	S4	VI	SELL-S4 (C2-8)
8	L4	GY	SELL-L4 (C2-7)
9	WRT	WH	STO-WRT (C1-1)
10	-12	BE	STO12 (C1-5)

C1

C2

Pin No.	Pin Name	Wire Color	Destination
1	S5	BR	SELL-S5 (C3-4)
2	L5	RE	SELL-L5 (C3-3)
3	S6	OR	SELL-S6 (C3-6)
4	1.6	YE	SELL-L6 (C3-5)
5	S7	GR	SELL-S7 (C3-8)
6	L7	BE	SELL-L7 (C3-7)
7	S8	VI	SELL-S8 (C3-10)
8	L8	GY	SELL-L8 (C3-9)
9	STO	GG	SELL-STO (C3-1)
10	Vss	-	_

C3

Pin No.	Pin Name	Wire Color	Destination
1	S1	BR	SELR-S1 (C1-4)
2	L9	RE	SELR-L9 (C1-3)
3	S2	OR	SELR-S2 (C1-6)
4	L10	YE	SELR-L10 (C1-5)
5	S3	GR	SELR-S3 (C1-8)
6	L11	86	SELR-L11 (C1-7)
7	54	VI	SELR-S4 (C1-10)
8	L12	GY	SELR-L12 (C1-9)
9	PLK	WH	LOCK SW-center terminal
10	S1	_	-

C4

Pin No.	Pin Name	Wire Color	Destination
1	S5	8R	SELR-S5 (C2-2)
2	L13	RE	SELR-L13 (C2-1)
3	S6	OR	SELR-S6 (C2-4)
4	L14	YE	SELR-L14 (C2-3)
5	S7	GR	SELR-S7 (C2-6)
6	L15	8E	SELR-L15 (C2-5)
7	\$8	VI	SELR-S8 (C2-8)
8	L16	GY	SELR-L16 (C2-7)
9	ST1	PK	SELR-ST1 (C1-1)
10	Vss	_	_

Pin No.	Pin Name	Wire Color	Destination
1	STRD	BR	STO-STRD (C1-4)
2	REV	RE	CR-REV (C1-1)
3	MSW	OR	CR-MSW (C1-6)
4	WPR	YE	CR-WPR (C1-5)
5	WEN	GR	CR-WEN (C1-3)
6	WDT	BE	CR-WDT (C1-4)
7	CLD	VI	CR-CLD (C1-7)
8	MON	GY	CR-MON (C1-8)
9	RCK	WH	CR-RCK (C1-9)
10	RDT	GG	CR-RDT (C1-10)
11	-7	GR	CR-+5V (V1-11)
12	-12	BE	CR-GND (C1-12)

C7

Pin No.	Pin Name	Wire Color	Destination
1	-7	GR	DC7 (C4-1)
2	Vss	BL	DC-Vss (C4-2)
3	-12	BE	DC12 (C4-3)
4	_	-	-
5	_	_	-
6	_	-	_

C8

C9

Pin No.	Pin Name	Wire Color	Destination
1	-12	BE	DC12 (C7-1)
2	PON	GR	DC-PON (C7-3)
3	-78	VI	DC78 (C7-5)

CN No.	CN Name	Destination
CN5	26P FLAT CABLE	(to PGM UNIT
CN6	20P FLAT CABLE	(to KC-CN1)

		_	•
Pin No.	Pin Name	Wire Color	Destination
1	A1	SBE	KC-A1 (C6-6)
2	Vss	SBES	
3	Vss	SGRS	
4	A2	SGR	KC-A2 (C6-5)
5	G#1	SYE	KC-G#1 (C6-4)
6	Vss	SYES	
7	Vss	SORS	
8	G#2	SOR	KC-G#2 (C6-3)
9	G1	SRE	KC-G1 (C8-2)
10	Vss	SRES	
11	Vss	SBRS	
12	G2	S BR	KC-G2 (C6-1)

M

		ı	

1 L1 SVI KC-L1 (C4-7) 2 Vss SVIS 3 Vss — —	Pin No.		Wire Color	Destination
3 Vss	1	L1	s vi	KC-L1 (C4-7)
	2	Vss	SVIS	
4 10	3	Vss	-	_
7 4 4	4	LO	-	-
5	5	-	-	_

C2

Pin No.	Pin Name	Wire Color	Destination
1	D#1	SBE	KC-D#1 (C5-6)
2	Vss	SBES	
3	Vss	SGRS	
4	D#2	S GR	KC-D#2 (C5-5)
5	D1	SYE	KC-D1 (C5-4)
6	Vss	SYES	
7	Vss	SORS	
8	D2	SOR	KC-D2 (C5-3)
9	C#1	SRE	KC-C#1 (C5-2)
10	Vss	SRES	
11	Vss	SBRS	
12	C#2	SBR	KC-C#2 (C5-1)

C3

Pin No.	Pin Name	Wire Color	Destination
1	F#1	SPK	KC-F#1 (C5-12)
2	Vss	SPKS	
3	Vss	SSBS	
4	F#2	S SB	KC-F#2 (C5-11)
5	F1	S GG	KC-F1 (C5-10)
6	Vss	SGGS	
7	Vss	SWHS	
8	F2	SWH	KC-F2 (C5-9)
9	E1	SGY	KC-E1 (C5-8)
10	Vss	SGYS	
11	Vss	SVIS	
12	E2	s vi	KC-E2 (C5-7)

C4

Pin No.	Pin Name	Wire Color	Destination
1	A1	SBE	KC-A1 (C6-6)
2	Vss	SBES	
3	Vss	SGRS	
4	A2	SGR	KC-A2 (C6-5)
5	G#1	SYE	KC-G#1 (C6-4)
6	Vss	SYES	
7	Vss	SORS	
8	G#2	SOR	KC-G#2 (C6-3)
9	G1	SRE	KC-G1 (C6-2)
10	Vss	SRES	
11	Vss	SBRS	
12	G2	S BR	KC-G2 (C6-1)

MK4

C5

C6

C7

| Pin | Name | Wire | Destination | 1 | C1 | BR | MK3-C1 (C3-1) | 2 | C2 | RE | MK3-C2 (C3-2) | 3 | B1 | OR | MK3-B1 (C3-3) |

3 81 OR MK3-81 (C3-3) 4 82 YE MK3-82 (C3-4) 5 As1 GR MK3-As1 (C3-5) 6 As2 8E MK3-As2 (C3-6) 7 A1 VI MK3-A1 (C3-7) 8 A2 GY MK3-A2 (C3-8) 9 Gs1 WH MK3-Gs1 (C3-9) 10 Gs2 GG MK3-Gs2 (C3-10) 11 G1 S8 MK3-G1 (C3-11) 12 G2 PK MK3-G2 (C3-12)

C8

5 Vss SBES

C1

in Io.	Pin Name	Wire Color	Destination
1	L1	s vI	KC-L1 (C4-7)
2	Vss	SVIS	
3	Vss	-	-
4	LO	-	-
5	_	_	_

C2

Pin No.	Pin Name	Wire Color	Destination
1	D#1	SBE	KC-D#1 (C5-6)
2	Vss	SBES	
3	Vss	SGRS	
4	D#2	S GR	KC-D#2 (C5-5)
5	D1	SYE	KC-D1 (C5-4)
6	Vss	SYES	
7	Vss	SORS	
8	D2	SOR	KC-D2 (C5-3)
9	C#1	SRE	KC-C#1 (C5-2)
10	Vss	SRES	
11	Vss	S BR S	
12	C#2	SBR	KC-C#2 (C5-1)

Pin No.	Pin Name	Wire Color	Destination
1	F#1	S PK	KC-F#1 (C5-12)
2	Vss	SPKS	
3	Vss	SSBS	
4	F#2	S SB	KC-F #2 (C5-11)
5	F1	S GG	KC-F1 (C5-10)
6	Vss	S GG S	
7	Vss	SWHS	
8	F2	S WH	KC-F2 (C5-9)
9	E1	S GY	KC-E1 (C5-8)
10	Vss	SGYS	
11	Vss	SVIS	
12	E2	s vi	KC-E2 (C5-7)

C4

Pin No.	Pin Name	Wire Color	Destination
1	A1	SBE	KC-A1 (C6-6)
2	Vss	SBES	
3	Vss	SGRS	
4	A2	S GR	KC-A2 (C6-5)
5	G#1	SYE	KC-G#1 (C6-4)
6	Vss	SYES	
7	Vss	SORS	
8	G#2	SOR	KC-G#2 (C6-3)
9	G1	SRE	KC-G1 (C8-2)
10	Vss	SRES	
11	Vss	SBRS	
12	G2	SBR	KC-G2 (C6-1)

C9						
Pin No.	Pin Name	Wire Color	Destination			
1	C#1	SB	MK3-C#1 (C2-1)			
2	C#2	PK	MK3-C#2 (C2-2)			
3	Vss	BL	MK3-Vss (C2-3)			
4	Vss	BL	MK3-Vss (C2-4)			
5	Vss	BL	DC-Vss (C2-2)			

MK3

C1

Pin No.	Pin Name	Wire Color	Destination
1	F#1	BR	MK4-F#1 (C8-1)
2	F#2	RE	MK4-F#2 (C8-2)
3	F1	OR	MK4-F1 (C8-3)
4	F2	YE	MK4-F2 (C8-4)
5	E1	GR	MK4-E1 (C8-5)
6	E2	BE	MK4-E2 (C8-6)
7	D#1	VI	MK4-D #1 (C8-7)
8	D#2	GY	MK4-D#2 (C8-8)
9	D1	WH	MK4-D1 (C8-9)
10	D2	GG	MK4-D2 (C8-10)

C2

Pin No.	Pin Name	Wire Color	Destination
1	C#1	SB	MK4-C #1 (C9-1)
2	C#2	PK	MK4-C #2 (C9-2)
3	Vss	BL	MK4-Vss (C9-3)
4	Vss	BL	MK4-Vss (C9-4)
5	Vss	-	_

C3

Pin No.	Pin Name	Wire Color	Destination
1	C1	BR	MK4-C1 (C7-1)
2	C2	RE	MK4-C2 (C7-2)
3	81	OR	MK4-B1 (C7-3)
4	82	YE	MK4-82 (C7-4)
5	A#1	GR	MK4-A#1 (C7-5)
6	A#2	BE	MK4-A#2 (C7-6)
7	A1	VI	MK4-A1 (C7-7)
8	A2	GY	MK4-A2 (C7-8)
9	G#1	WH	MK4-G#1 (C7-9)
10	G#2	GG	MK4-G#2 (C7-10)
11	G1	SB	MK4-G1 (C7-11)
12	G2	PK	MK4-G2 (C7-12)

C4

	Pin No.	Pin Name	Wire Color	Destination
	1	Vss	SBRS	
	2	L7	S BR	KC-L7 (C4-1)
	3	Vss	SRES	
	4	L6	SRE	KC-L6 (C4-2)
	5	Vss	S OR S	
1	6	L5	SOR	KC-L5 (C4-3)
	7	Vss	SYES	
	8	L4	SYE	KC-L4 (C4-4)

C5

Pin No.	Pin Name	Wire Color	Destination
1	Vss		TEST POINT
2	L7		TEST POINT
3	Vss		TEST POINT
4	L6		TEST POINT
5	Vss		TEST POINT
6	L5		TEST POINT
7	Vss		TEST POINT
8	L4		TEST POINT

C6

Pin No.	Pin Name	Wire Color	Destination
1	CM1		TEST POINT
2	_	- 1	_
3	CM2		TEST POINT

Α

Pin No.	Pin Name	Wire Color	Destination
1	E	SRES	BAL2 OUT-PIN1
2	E	SORS	BAL2 OUT-PIN1
3	E	SYES	BAL1 OUT-PIN1
4	BAL2A	SRE	BAL2 OUT-PIN2
5	BAL2B	SOR	BAL2 OUT-PIN3
6	E	SGRS	BAL1 OUT-PIN1
7	BAL1A	SYE	BAL1 OUT-PIN2
8	BAL1B	S GR	BAL1 OUT-PIN3

C1

C2

Pin No.	Pin Name	Wire Color	Destination
1	E	SWHS	MIXED OUT-PINS-E
2	E	-	-
3	E	SBES	OUTPUT2-PIN5-E
4	MIX	S WH	MIXED OUT-PIN7-HOT
5	E	SVIS	OUTPUT1-PIN5-E
6	OUT2	SBE	OUTPUT2-PIN7-HOT
7	OUT1	s vi	OUTPUT1-PIN7-HOT

C3

Pin No.	Pin Name	Wire Color	Destination
1	E	BL	MKL-EP
2	LAMP	YE	FC-P1-3 F/C-J-pin2
3	HPO1	BR	HP-P1-2 HP-J-R
4	HPO2	RE	HP-P1-1 HP-J-L
5	Ε	BL	HP-P1-3 HP-J-E

C4

Pin No.	Pin Name	Wire Color	Destination
1	EXP	BE	FC-P1-1 F/C-J-pin4
2	E	BL	FC-P1-2 F/C-J-pin3,8
3	LIN	Vt	HP-P1-4 LINE SW Center Terminal
4	E	-	-
5	TRMI2	SBR	EQ-TRMI2 (C2-1)
6	E	SBRS	
7	TRM[1	SRE	EQ-TRMI1 (C2-4)
8	E	SRES	

C5

Pin No.	Pin Name	Color	Destination
1	_	-	-
2	IC	OR	KC-IC (C1-3)
3	IC	_	-
4	IC	-	_
5	E	-	-
6	EO1	SOR	EQ-E01 (C1-4)
7	E	SORS	
8	ENSS	GR	SELL-ENSS (C1-4)
9	E	SYES	
10	EO2	SYE	EQ-EO2 (C1-5)

Pin No.	Pin Name	Wire Color	Destination
1	TRMDO	RE	EFF-TRMDO (C4-4
2	TRMSI	OR	EFF-TRMSI (C4-3)
3	-	_	-
4	E	-	-
5	TRMSO	YE	EFF-TRMSO (C4-2)
6	TRMPD	GR	FC-P1-7 F/S4P-3
7	TRMSW	BE	SELL-TRMSW (C1-1)
8	TRMDI	BR	EFF-TRMDI (C4-5)

C6

C7

Pin No.	Pin Name	Wire Color	Destination
1	PC3	GR	EFF-PC3 (C1-2)
2	PC0	RE	KC-VIB (C1-2)
3	PC2	OR	EFF-PC2 (C1-3)
4	PC1	YE	EFF-PC1 (C1-4)
5	Ε	BL	EFF-E (C1-1)

C8

Pin No.	Pin Name	Wire Color	Destination
1	AI2	SBE	FM-AO (C3-5)
2	Ε	-	_
3	E	-	_
4	E	SGRS	FM-E (C3-2)
5	AI1	S GR	FM-AO (C3-4)

C9

Pin No.	Pin Name	Wire Color	Destination
1	VIBSP	VI	EFF-VIBSP (C3-3)
2	VIBPO	GG	FC-P1-8 F/S4P-4
3	-	-	-
4	VIBDI	GR	EFF-VIBDI (C3-5)
5	E	_	-
6	-	-	-
7	VIBDO	BE	EFF-VIBDO (C3-4

C10

Destination	Wire Color	Pin Name	Pin No.
DC12 (C3-3)	BE	-12	1
DC15 (C3-4)	BR	-15	2
-	-	E	3
-	-	E	4
-	_	E	5
DC-E (C3-5)	BL	E	6
DC-+15 (C3-6)	OR	+15	7

EFF

C1

Pin No.	Pin Name	Wire Color	Destination
1	E	BL	A-E (C7-5)
2	PC3	GR	A-PC3 (C7-1)
3	PC2	OR	A-PC2 (C7-3)
4	PC1	YE	A-PC1 (C7-4)
5	E	BL	EFF-E (C1-1)

C2

Pin No.	Pin Name	Wire Color	Destination
1	Vss	BL	KC-Vss (C1-1)
2	DP1	OR	KC-DP1 (C3-3)
3	DP3	GR	KC-DP3 (C3-5)
4	_	_	-
5	-	-	-

C3

Pin No.	Pin Name	Wire Color	Destination
1	-	-	-
2	E	8L	PIT-C1-5
3	VIBSP	VI	A-VIBSP (C9-1)
4	VIBDO	BE .	A-VIBDO (C9-7)
5	VIBDI	GR	A-VIBDI (C9-4)

C4

Pin No.	Pin Name	Wire Color	Destination
1	-	-	-
2	TRMSO	YE	A-TRMSO (C6-5)
3	TRMSI	OR	A-TRMSI (C6-2)
4	TRMDO	RE	A-TRMDO (C6-1)
5	TRMDI	BR	A-TRMDI (C6-8)

C5

No.	Name	Color	Destination
1	C1	SPK	KC-C1 (C6-12)
2	Vss	SPKS	
3	Vss	S SB S	
4	C2	S SB	KC-C2 (C6-11)
5	81	S GG	KC-B1 (C6-10)
6	Vss	S GG S	
7	Vss	SWHS	
8	82	SWH	KC-82 (C6-9)
9	A=1	SGY	KC-A=1 (C6-8)
10	Vss	SGYS	
11	Vss	SVIS	
12	A#2	s v i	KC-A=2 (C6-7)

C6

Pin No.	Pin Name	Wire Color	Destination
1	Vss	_	-
2	L3	SGR	KC-L3 (C4-5)
3	Vss	SGRS	
4	L2	SBE	KC-L2 (C4-6)
5	Vss	SBES	

C7

Pin No.	Pin Name	Wire Color	Destination
1	C1	BR	MK3-C1 (C3-1)
2	C2	RE	MK3-C2 (C3-2)
3	B1	OR	MK3-81 (C3-3)
4	82	YE	MK3-B2 (C3-4)
5	A#1	GR	MK3-A \$ 1 (C3-5)
6	A#2	BE	MK3-A = 2 (C3-6)
7	A1	VI	MK3-A1 (C3-7)
8	A2	GY	MK3-A2 (C3-8)
9	G s 1	WH	MK3-G \$1 (C3-9)
10	G=2	GG	MK3-G#2 (C3-10)
11	G1	SB	MK3-G1 (C3-11)
12		214	14440 00 (00 10)

C8

Pin No.	Pin Name	Wire Color	Destination
1	F#1	BR	MK3-F#1 (C1-1)
2	F=2	RE	MK3-F #2 (C1-2)
3	F1	OR	MK3-F1 (C1-3)
4	F2	YE	MK3-F2 (C1-4)
5	E1	GR	MK3-E1 (C1-5)
6	E2	BE	MK3-E2 (C1-6)
7	D#1	٧I	MK3-D#1 (C1-7)
8	D = 2	GY	MK3-0 = 2 (C1-8)
9	D1	WH	MK3-D1 (C1-9)
10	D2	GG	MK3-D2 (C1-10)

C9

Pin No.	Pin Name	Wire Color	Destination
1	C#1	SB	MK3-C #1 (C2-1)
2	C#2	PK	MK3-C#2 (C2-2)
3	Vss	BL	MK3-Vss (C2-3)
4	Vss	BL	MK3-Vss (C2-4)
5	Vss	BL	DC-Vss (C2-2)

MK3

C1

Pin No.	Pin Name	Wire Color	Destination
1	F#1	8R	MK4-F#1 (C8-1)
2	F#2	RE	MK4-F#2 (C8-2)
3	F1	OR	MK4-F1 (C8-3)
4	F2	YE	MK4-F2 (C8-4)
5	E1	GR	MK4-E1 (C8-5)
6	E2	8E	MK4-E2 (C8-6)
7	D#1	VI	MK4-D #1 (C8-7)
8	D#2	GY	MK4-D# 2 (C8-8)
9	D1	WH	MK4-D1 (C8-9)
10	D2	GG	MK4-D2 (C8-10)

C2

Pin No.	Pin Name	Wire	Destination
1	C#1	SB	MK4-C#1 (C9-1)
2	C#2	PK	MK4-C #2 (C9-2)
3	Vss	BL.	MK4-Vss (C9-3)
4	Vss	8L	MK4-Vss (C9-4)
5	Vss	_	_

СЗ

Pin No.	Pin Name	Wire Color	Destination
1	C1	BR	MK4-C1 (C7-1)
2	C2	RE	MK4-C2 (C7-2)
3	81	OR	MK4-B1 (C7-3)
4	82	YE	MK4-82 (C7-4)
5	A#1	GR	MK4-A#1 (C7-5)
6	A#2	BE	MK4-A#2 (C7-6)
7	A1	VI	MK4-A1 (C7-7)
8	A2	GY	MK4-A2 (C7-8)
9	G#1	WH	MK4-G#1 (C7-9)
10	G#2	GG	MK4-G#2 (C7-10)
11	G1	SB	MK4-G1 (C7-11)
12	G2	PK	MK4-G2 (C7-12)

C4

Pin No.	Pin Name	Wire Color	Destination
1	Vss	SBRS	
2	L7	SBR	KC-L7 (C4-1)
3	Vss	SRES	
4	L6	S RE	KC-L6 (C4-2)
5	Vss	S OR S	
6	L5	SOR	KC-L5 (C4-3)
7	Vss	SYES	
8	L4	SYE	KC-L4 (C4-4)

C5

Pin No.	Pin Name	Wire Color	Destination
1	Vss		TEST POINT
2	L7		TEST POINT
3	Vss		TEST POINT
4	L6		TEST POINT
5	Vss		TEST POINT
6	L5		TEST POINT
7	Vss		TEST POINT
8	14		TEST POINT

C6

Pin No.		Wire Color	Destination
1	CM1		TEST POINT
2	-	-	-
3	CM2		TEST POINT

Α

C1

E S	RES ORS YES	BAL2 BAL1	OUT-PIN1 OUT-PIN1 OUT-PIN1
E S	YES	BAL1	
	-		OUT-PIN1
34 6			
LZAS	RE	BAL2	OUT-PIN2
L2B S	OR	BAL2	OUT-PINS
E S	GRS	BAL1	OUT-PIN1
L1A S	YE	BAL1	OUT-PIN2
119 6	GR	BAL1	OUT-PIN3
	L1AS	L1A S YE	LIASYE BALI

Pin No.	Name	Color	Destination
1	TRMDO	RE	EFF-TRMDO (C4-4
2	TRMSI	OR	EFF-TRMSI (C4-3)
3	-	_	-
4	E	-	-
5	TRMSO	YE	EFF-TRMSO (C4-2
6	TRMPD	GR	FC-P1-7 F/S4P-3
7	TRMSW	8E	SELL-TRMSW (C1-1)
8	TRMDI	BR	EFF-TRMDI (C4-5

Pin No.	Pin Name	Wire Color	Destination
1	E	SWHS	MIXED OUT-PINS-
2	E	-	-
3	E	SBES	OUTPUT2-PIN5-E
4	MIX	S WH	MIXED OUT-PIN7-HOT
5	E	SVIS	OUTPUT1-PIN5-E
6	OUT2	SBE	OUTPUT2-PIN7-HOT
7	OUT1	svi	OUTPUT1-PIN7-HOT

C2

	CS						
Pin No.	Pin Name	Wire Color	Destination				
1	Ε	BL.	MKL-EP				
2	LAMP	YE	FC-P1-3 F/C-J-pin2				
3	HPO1	BR	HP-P1-2 HP-J-R				
4	HPO2	RE	HP-P1-1 HP-J-L				
5	E	BL	HP-P1-3 HP-J-E				

C4

Pin No.	Pin Name	Wire Color	Destination
1	EXP	BE	FC-P1-1 F/C-J-pin4
2	Ε	BL	FC-P1-2 F/C-J-pin3.1
3	LIN	VI	HP-P1-4 LINE SW Center Terms
4	Ε	-	-
5	TRMI2	SBR	EQ-TRMI2 (C2-1)
6	Ε	SBRS	
7	TRMI1	SRE	EQ-TRMI1 (C2-4)
8	Ε	SRES	

C5

Pin No.	Pin Name	Wire Color	Destination
1	_	-	-
2	IC	OR	KC-IC (C1-3)
3	IC	-	_
4	IC	_	-
5	Ε	, -	-
6	EO1	SOR	EQ-E01 (C1-4)
7	Ε	SORS	
8	ENSS	GR	SELL-ENSS (C1-4)
9	E	SYES	
10	EO2	SYE	EQ-E02 (C1-5)

Pin No.	Pin Name	Wire Color	Destination
1	TRMDO	RE	EFF-TRMDO (C4-4
2	TRMSI	OR	EFF-TRMSI (C4-3)
3	-	_	-
4	E	-	-
5	TRMSO	YE	EFF-TRMSO (C4-2
6	TRMPD	GR	FC-P1-7 F/S4P-3
7	TRMSW	BE	SELL-TRMSW (C1-1)
8	TRMDI	BR	EFF-TRMDI (C4-5)

C6

C7

Pin No.	Pin Name	Wire Color	Destination
1	PC3	GR	EFF-PC3 (C1-2)
2	PC0	RE	KC-VIB (C1-2)
3	PC2	OR	EFF-PC2 (C1-3)
4	PC1	YE	EFF-PC1 (C1-4)
5	Ε	BL	EFF-E (C1-1)

C8

Pin No.	Pin Name	Wire Color	Destination
1	AI2	SBE	FM-AO (C3-5)
2	E	-	_
3	Ε	-	_
4	Ε	SGRS	FM-E (C3-2)
5	AI1	SGR	FM-AO (C3-4)

C9

Pin No.	Pin Name	Wire Color	Destination
1	VIBSP	VI	EFF-VIBSP (C3-3)
2	VIBPD	GG	FC-P1-8 F/S4P-4
3	-	-	-
4	VIBDI	GR	EFF-VIBDI (C3-5)
5	E	-	-
6	-	-	-
7	VIBDO	BE	EFF-VIBDO (C3-4)

C10

Pin No.	Pin Name	Wire Color	Destination
1	-12	BE	DC12 (C3-3)
2	-15	BR	DC15 (C3-4)
3	Ε	-	-
4	Ε	-	-
5	E	-	-
6	Ε	BL	DC-E (C3-5)
7	+15	OR	DC+15 (C3-6)

EFF

C1

Pin No.	Pin Name	Wire Color	Destination
1	Ε	BL.	A-E (C7-5)
2	PC3	GR	A-PC3 (C7-1)
3	PC2	OR	A-PC2 (C7-3)
4	PC1	YE	A-PC1 (C7-4)
5	E	BL	EFF-E (C1-1)

C2

Pin No.	Pin Name	Wire Color	Destination
1	Vss	BL	KC-Vss (C1-1)
2	DP1	OR	KC-DP1 (C3-3)
3	DP3	GR	KC-DP3 (C3-5)
4	-	_	
5	_	-	_

C3

Pin No.	Pin Name	Wire Color	Destination
1	-	-	-
2	Ε	BL	PIT-C1-5
3	VIBSP	VI	A-VIBSP (C9-1)
4	VIBDO	BE.	A-VIBDO (C9-7)
5	VIBDI	GR	A-VIBDI (C9-4)

C4

Pin No.	Pin Name	Wire Color	Destination
1	-	_	-
2	TRMSO	YE	A-TRMSO (C6-5)
3	TRMSI	OR	A-TRMSI (C6-2)
4	TRMDO	RE	A-TRMDO (C6-1)
5	TRMDI	BR	A-TRMDI (C6-8)

SELL

C1

Pin No.	Pin Name	Wire Color	Destination
1	TRMSW	8E	A-TRMSW (C6-7)
2	Vss	8L	DC-Vss (C1-5)
3	-	-	_
4	ENSS	GR	A-ENSS (C5-8)
5	-12	8E	DC12 (C1-3)
	No. 1 2 3	No. Name	No. Name Color 1 TRMSW BE 2 Vss BL 3 4 ENSS GR

C2

Pin No.	Pin Name	Wire Color	Destination
1	L1	RE	RW-L1 (C1-2)
2	S1	BR	RW-S1 (C1-1)
3	L2	YE	RW-L2 (C1-4)
4	S2	OR	RW-S2 (C1-3)
5	L3.	BE	RW-L3 (C1-6)
6	53	GR	RW-S3 (C1-5)
7	L4	GY	RW-L4 (C1-8)
8	S4	VI	RW-S4 (C1-7)

C3

Pin No.	Pin Name	Wire Color	Destination
1	STO	GG	RW-STO (C2-9)
2	-7	GR	DC7 (C1-1)
3	L5	RE	RW-L5 (C2-2)
4	\$5	BR	RW-S5 (C2-1)
5	L6	YE	RW-L6 (C2-4)
6	S6	OR	RW-S6 (C2-3)
7	L7	8E	RW-L7 (C2-6)
8	\$7	GR	RW-S7 (C2-5)
9	L8	GY	RW-L8 (C2-8)
10	S8	٧I	RW-S8 (C2-7)

SELR

C1

Pin No.	Pin Name	Wire Color	Destination
1	ST1	PK	RW-ST1 (C4-9)
2	-7	GR	DC7 (C5-1)
3	L9	RE	RW-L9 (C3-2)
4	S1	BR	RW-S1 (C3-1)
5	L10	YE	RW-L10 (C3-4)
6	S2	OR	RW-S2 (C3-3)
7	L11	BE	RW-L11 (C3-6)
8	S3	GR	RW-S3 (C3-5)
9	L12	GY	RW-L12 (C3-8)
10	54	VI	RW-S4 (C3-7)

C2

Pin No.	Pin Name	Wire Color	Destination
1	L13	RE	RW-L13 (C4-2)
2	S5	BR	RW-S5 (C4-1)
3	L14	YE	RW-L14 (C4-4)
4	S6	OR	RW-S6 (C4-3)
5	L15	BE	RW-L15 (C4-6)
6	S7	GR	RW-S7 (C4-5)
7	L16	GY	RW-L16 (C4-8)
8	S8	٧I	RW-S8 (C4-7)

| Pin No. | Name C |

Pin Pin W No. Name Co

Pin No. Name Cd
1 TRMI2 SB
2 -15 E
3 +15 C
4 TRMI1 SR
5 E E

Pin Pin 1 No. Name C 1 MG 2 MG 3 M5V

EQ

C1

Pin No.	Pin Name	Wire Color	Destination
1	E	-	
2	E	_	-
3	Ε	_	-
4	EO1	SOR	A-EO1 (C5-6)
5	EO2	SYE	A-EO2 (C5-10)

C2

Pin No.	Pin Name	Wire Color	Destination
1	TRMI2	SBR	A-TRMI2 (C4-5)
2	-15	BR	DC15 (C2-4)
3	+15	OR	DC+15 (C2-6)
4	TRMI1	SRE	A-TRMI1 (C4-7)
6	-	01	DC E (C2 E)

STO

C1

Pin No.	Pin Name	Wire Color	Destination
1	WRT	WH	RW-WRT (C1-9)
2	-7	GR	DC7 (C3-1)
3	_	_	-
4	STRD	BR	RW-STRD (C7-1)
-	40	25	LOOK CILL LOCK

CR

C1

Pin No.	Pin Name	Wire Color	Destination
1	REV	RE	RW-REV (C7-2)
2	_	_	_
3	WEN	GR	RW-WEN (C7-5)
4	WDT	RE	RW-WDT (C7-6)
5	WPR	YE	RW-WPR (C7-4)
6	MSW	OR	RW-MSW (C7-3)
7	CLD	VI	RW-CLD (C7-7)
8	MON	GY	RW-MON (C7-8)
9	RCK	WH	RW-RCK (C7-9)
10	ROT	GG	RW-RDI (C7-10)
11	+5V	GR	RW7 (C7-11)
12	GND	RE	RW12 (C7-12)

C2

Pin No.	Pin Name	Wire Color	Destination
1	MG	BE	DC12 (C2-3)
2	MG	_	_
3	M5V	GR	DC7 (C2-1)

DC

C1

Pin No.	Pin Name	Wire Color	Destination
1	-7	GR	SELL7 (C3-2)
2	Vss	-	_
3	-12	BE	SELL12 (C1-5)
4	-15	-	_
5	Vss	BL	SELL-Vss (C1-2)
6	+15	_	_

C5

Pin No.	Pin Name	Wire Color	Destination
1	-7	GR	SELR7 (C1-2)
2	Vss	BL	FM-Vss (C2-2)
3	-12	BE	FM12 (C2-3)
4	-15	BR	FM15 (C2-6)
5	E	BL	FM-E (C2-5)
6	+15	OR	FM-+15 (C2-4)

C2

Pin No.	Pin Name	Wire Color	Destination
1	-7	GR	CR-M5V (C2-3)
2	Vss	BL	MK4-Vss (C9-5)
3	-12	BE	CR-MG (C2-1)
4	-15	BR	EQ15 (C2-2)
5	E	BL	EQ-E (C2-5)
6	+15	OR	EQ-+15 (C2-3)

C6

Pin No.	Pin Name	Color	Destination
1	-7	GR	KC7 (C7-1)
2	Vss	BL	KC-Vss (C7-2)
3	-12	BE	KC12 (C7-3)
4	-15	_	-
5	E	BL	KC-E (C7-5)
6	+15	OR	KC+15 (C7-6)

СЗ

Pin No.	Pin Name	Wire Color	Destination	
1	-7	GR	STO7 (C1-2)	
2	Vss	_	_	
3	-12	BE	A12 (C10-1)	
4	-15	BR	A15 (C10-2)	
5	E	BL	A-E (C10-6)	
6	+15	OR	A-+15 (C10-7)	

C7

Destination	Wire Color		
RW12 (C9-1)	BE	-12	1
_	_	_	2
RW-PON (C9-2)	GR	PON	3
_	_	-	4
RW78 (C9-3)	VI	-78	5

	C4						
_			Pin No.	Pin Name	Wire Color	Destination	
n ne	Wire	Destination	1	-12	BE	BB UNIT ⊖	
7	GR	RW7 (C8-1)	2	-	-	_	
18	BL	RW-Vss (C8-2)	3	-7B	VI	88 UNIT 🕀	
2	06	DW 12 (CQ 2)					

BB UNIT

C1

Pin No.	Pin Name	Wire Color	Destination		
1					
2	-12	BE	DC12 (C8-1)		
3	_	_	_		
4	-78	VI	DC78 (C8-3)		

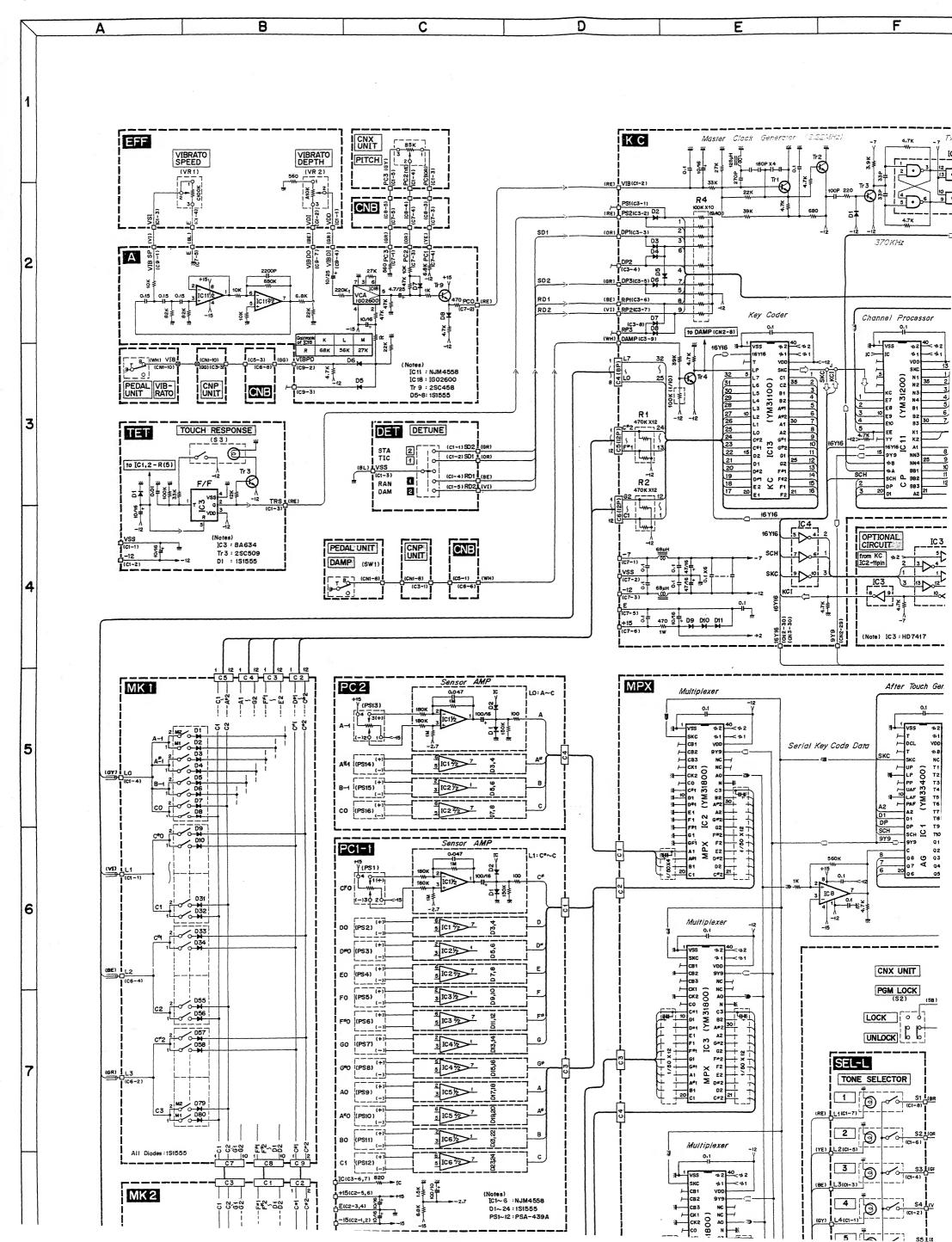
PGM UNIT

CN No.		Destination		
CN1	24P connector	(to RW-CN5)	I	

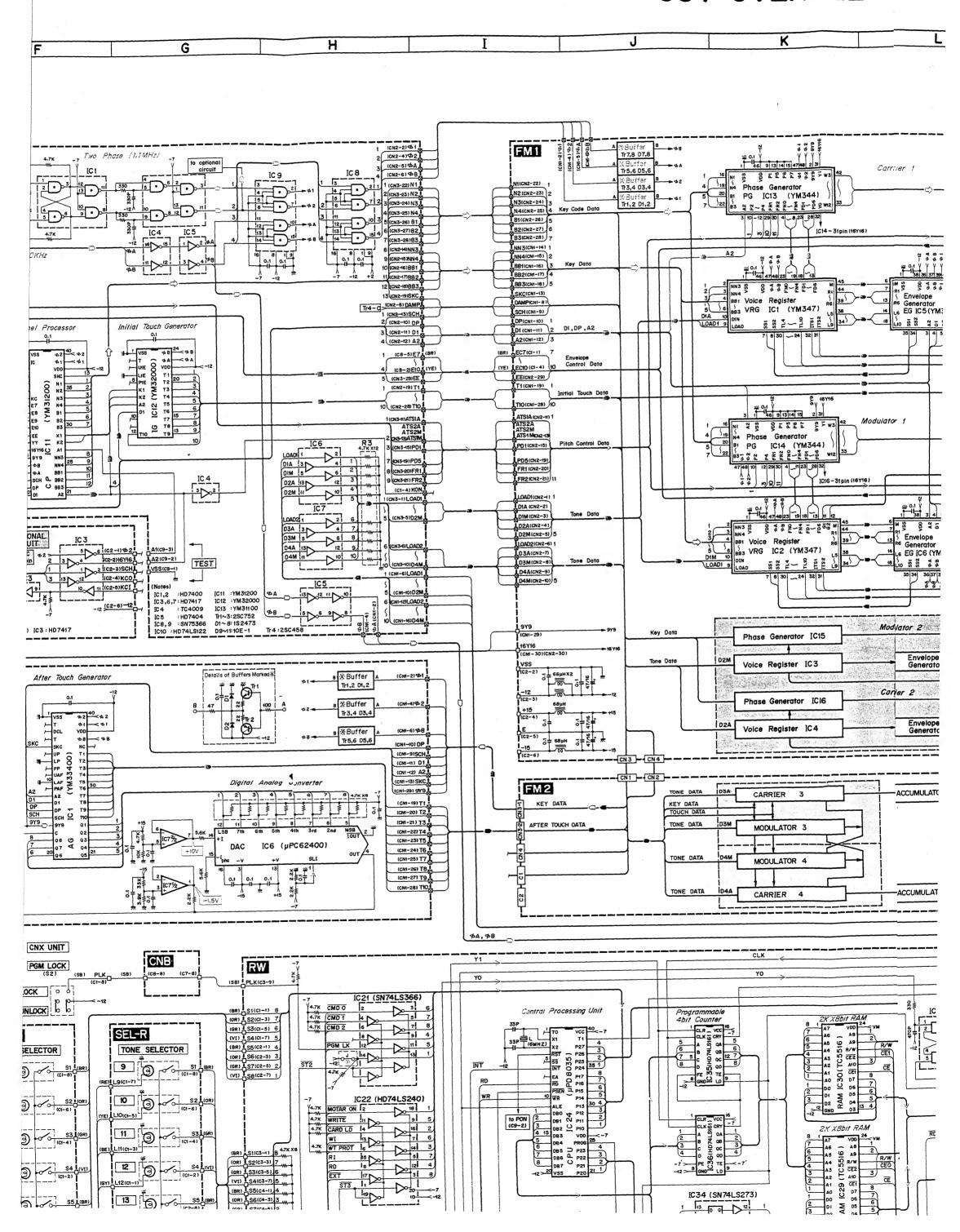
LOCK SW

Pin No.	Pin Name	Wire Color	Destination		
1	CENTER	WH	RW-PLK (C3-9)		
2	LOCK	BE	RW12 (C1-10)		
3		BE	STO12 (C1-5)		

GS1 OVERALL CIRCUIT DIAGRAM



GS1 OVERALL CIRC



AGRAM 002652

13 2

BUSY (CN5-6)

IC18

M 0 P Q N R 21 4 4 4 48 47 48 QQA Accumulator Accumulator. rator (Carrier)
C IC17 (YM345-1) IC21 (YM 31600 IC22(YM31600 IN1 C V00
IN2 C OUT

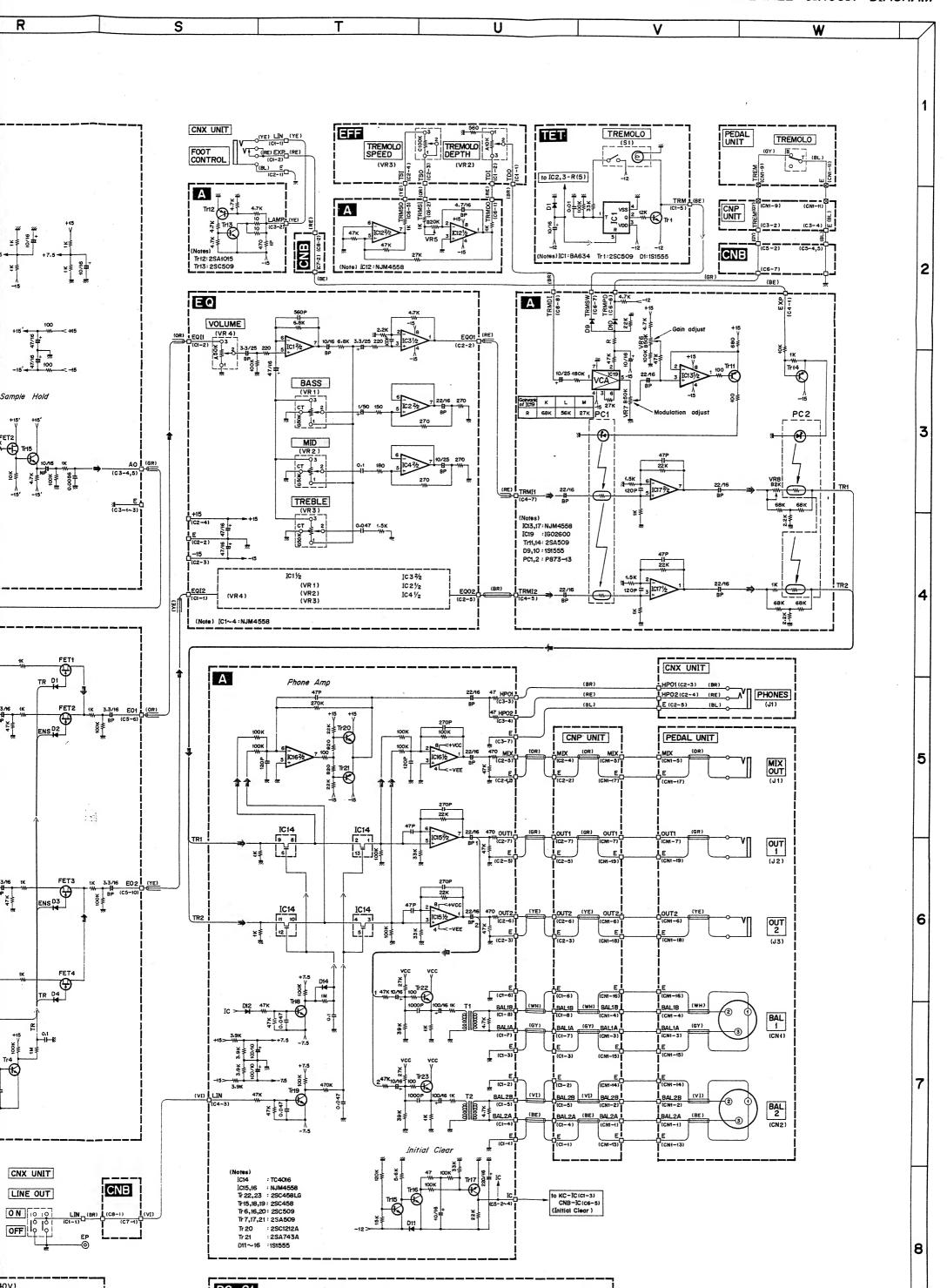
M X X B1
S2 C O B2
S1 D B3 A ACC relope Controller IC9 (YM 322) Digital Analog Converter E~ 8 £ 8 68 R2 10K XH (H1/H2 FET1 1 IC25 8 4 8 erator (Modulator) -(1) Tr14 M [C18 (YM345-2) 6.8K 5.6K IC 24 (PPC610D) (C3-1~3) IC24 : µPC610D
IC25 : TC4051
IC26 : TC4056
IT1,3,5,7 : 2SC1959
TT2,4,6,8,14:2SA105
TT9-153,16 : 2SC458
FET1,2 : 2SK105
D : 1100 IC1~4 : YM347 IC5~8: YM321 IC5~8: YM322 IC3~16: YM344 IC17,19: YM345-1 IC18,20: YM345-2 IC21,22: YM316 IC23: YM327 velope Controller ICIO (YM322) 元 11.00 11 Α Buffer Amp or (Modulator 2) IC19 TR DI velope IC11 ontroller Mixing PreAmp tor (Carrier 2) IC20 velope IC12 ntroller Symphonic Ens. Spec 106 Tr 2 ENS D3 IC3 IC 7 Tr 3 Buffer Amp FET4 **⊕** Tremolo/Ensemble ENSEMBLE Gate Control TET IC13 1:3 • 11 1:3 • 11 1:5 • 6 1 3 100 4776 4776 100 C 11 .O_ 100K 120 × IC1 : YM63300 IC2~4 : IG03290 IC5~7 : MN3009 : YM63300 IC2 LOAD 1 (CN6-6) LOAD 2 (CN6-12) to IC1,3-R(5) Tr4 5 % 6101 6 6 6 IC8~10 : NJM4558 12 3 Tr1~3 : 2SC458LG Tr4,5 : 2SC458 FET1~4 : 2SK30A 10/16 D1 IC 4 € D1~4 : 1S1555 ZD1 : WZ050 13 -VEE -15 21 Tr2:2SC509 D1:1S1555 (CN6²16) D4**M** CNX UNIT PROGRAM CN1(24P) DIA (CN5-17) CNB CNX UNIT Bi-directional
Bus Transceivers CNB (CN5²24) 04M IC 4 \$\frac{\text{\tinx}\text{\tinx}\text{\tilit{\text{\te\tinte\text{\text{\text{\text{\text{\texicr{\texi}\text{\text{\ticl{\ticr{\text{\texi}\text{\texi}\text{\texititt{\text{\texit{\terictex{\texit{\text{\texi{\texi{\texi\tirichter{\terinte\tinte\ (RE) (OR) (YE) (GR) D4A A0 G EN 8
D4A A1 C EN 8
D5A A2 C 9 81 1
D5M A4 C 9 81 5
D5M A7 C 9 86 1
D5 LINE OUT ON OFF ON **⊅**8 (BE) G (VI) G I (GY) CTRL1 (WH) D2A (GG) D3A (SB) D4A (PK) G I (BE READY (WH) (GG) (SB) S S

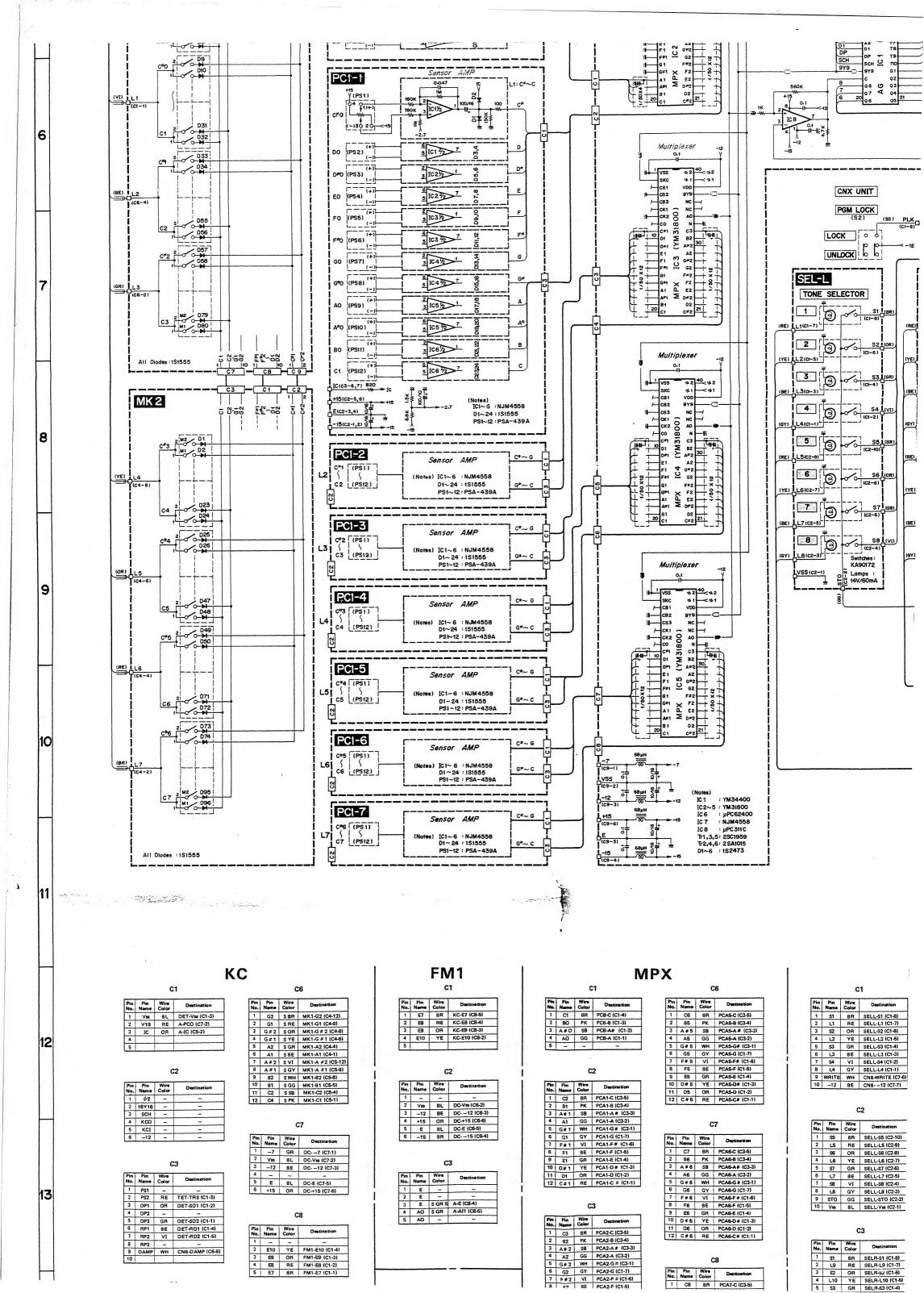
(PK)

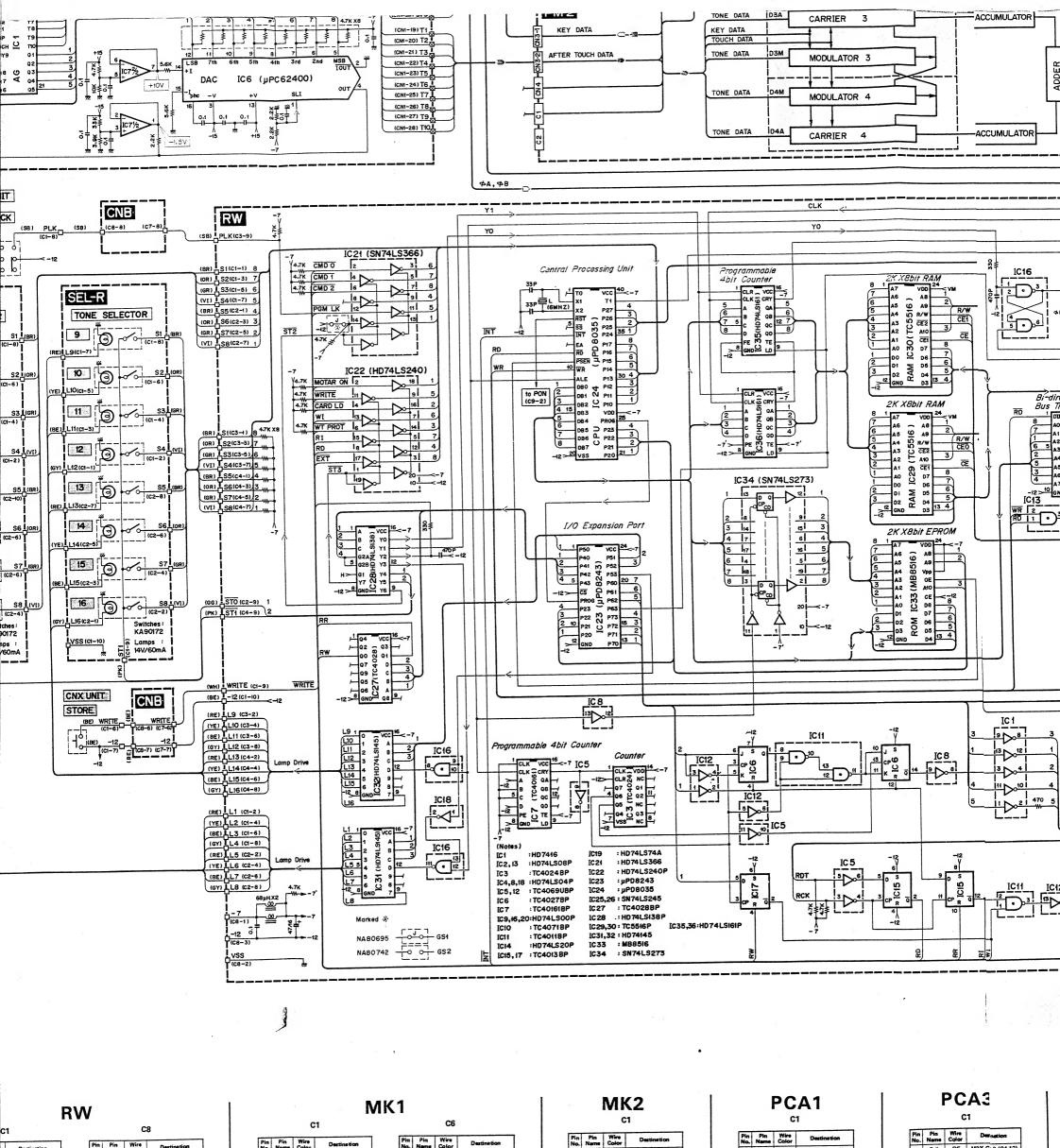
(PK)

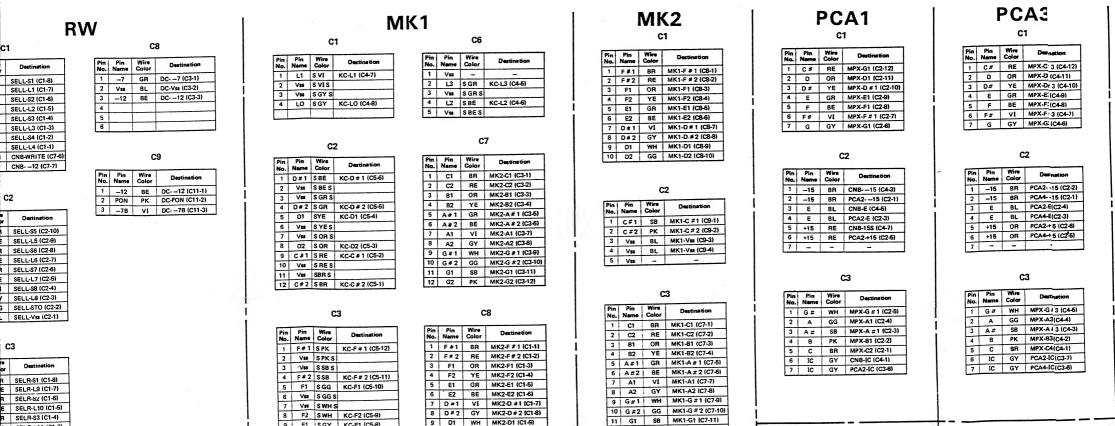
General Export (240V)

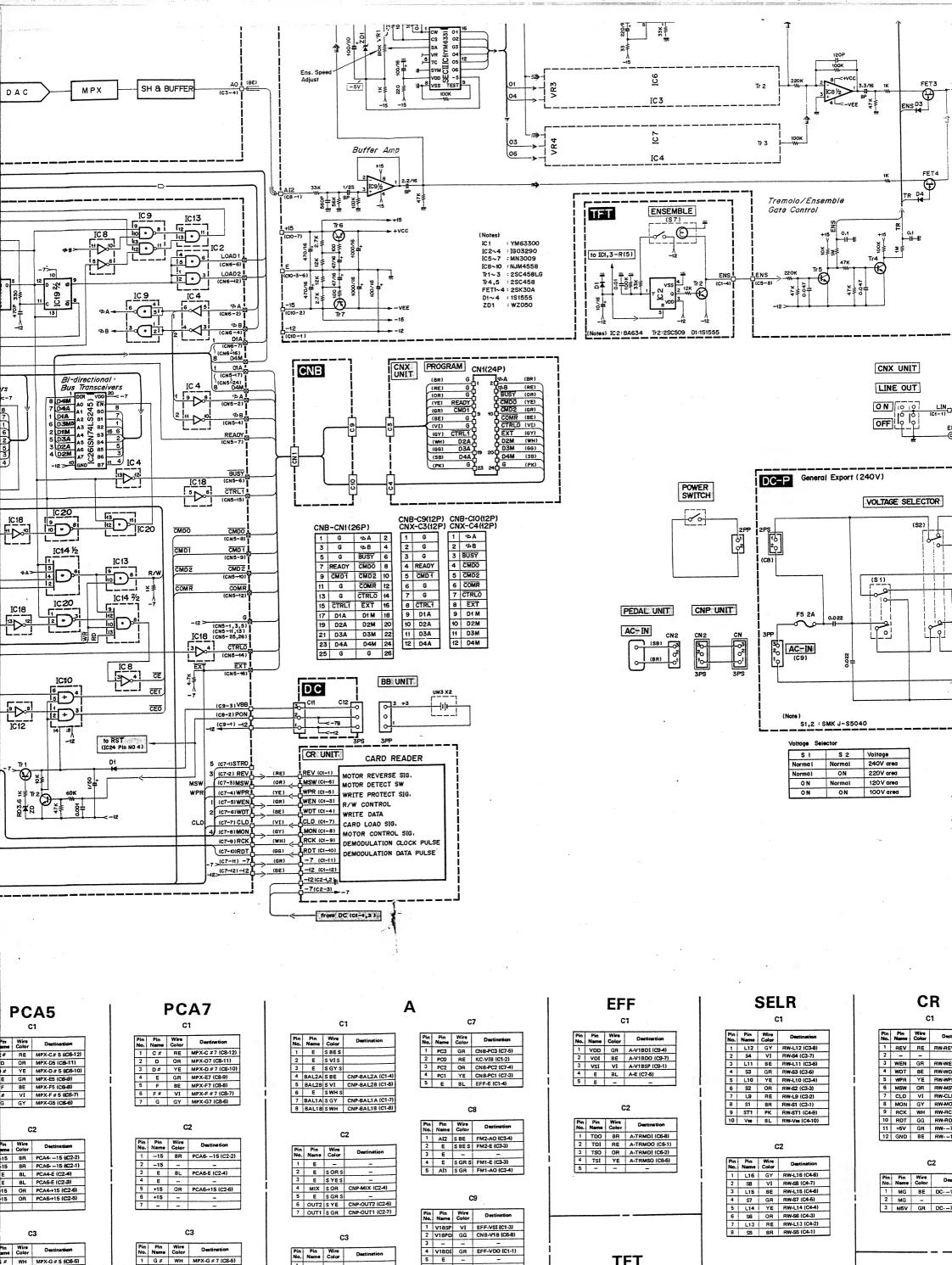
GS1 OVERALL CIRCUIT DIAGRAM







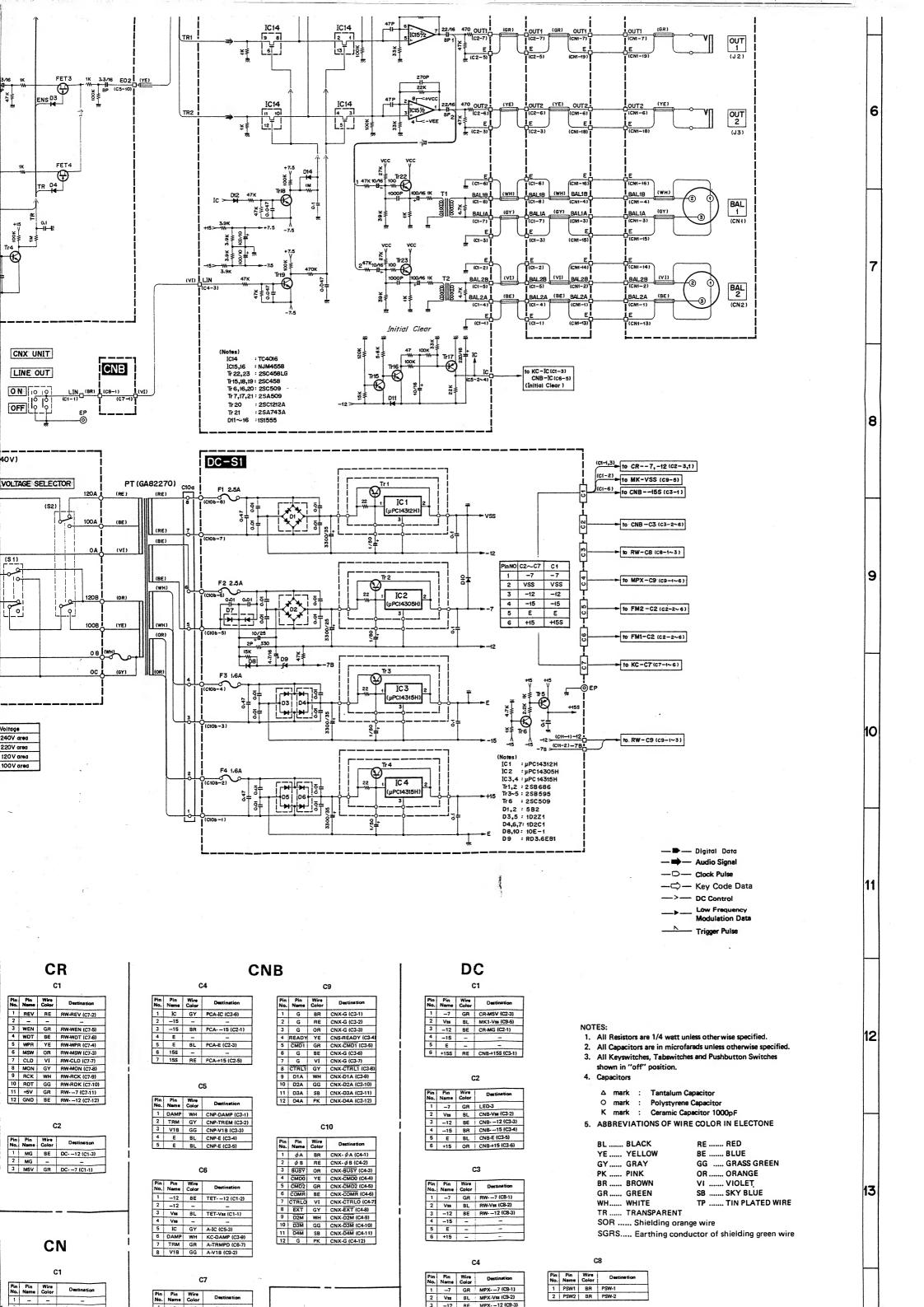


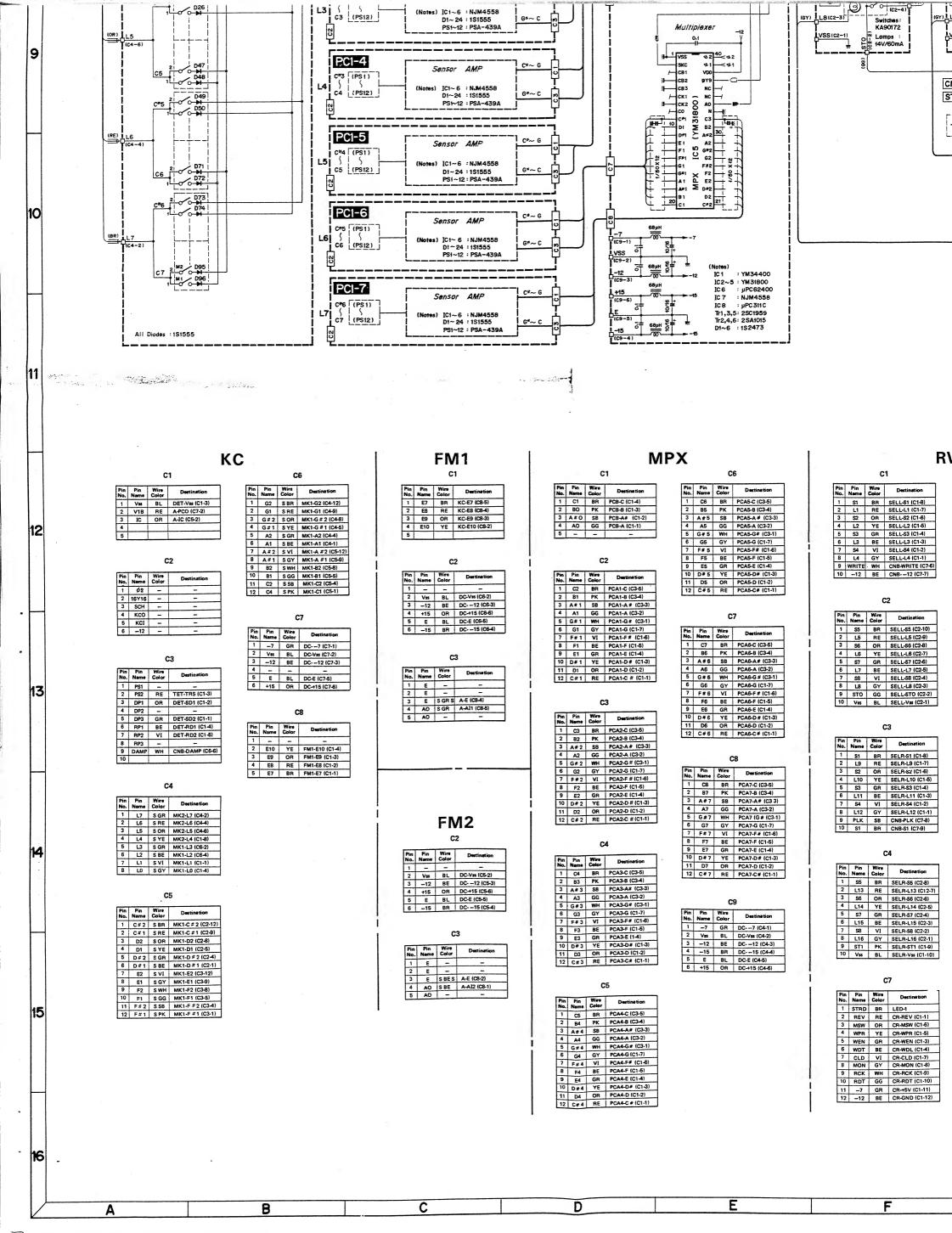


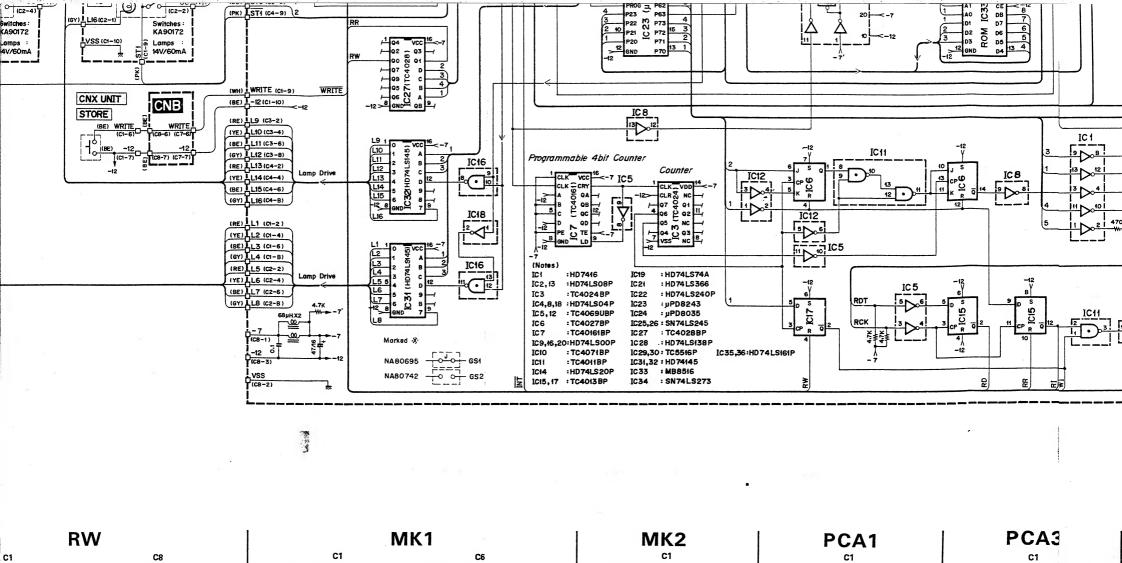
Pin Pin Wire No. Name Color 1 G# WH MPX-G#7 (C8-5) TET # WH MPX-G # 5 (C6-5)
A GG MPX-A5 (C6-4) 2 A GG MPX-A7 (C8-4) 3 A# SB MPX-A #7 (C8-3) 7 V1BDO BE EFF-VDI (C1-2) # SB MPX-A #5 (C6-3)

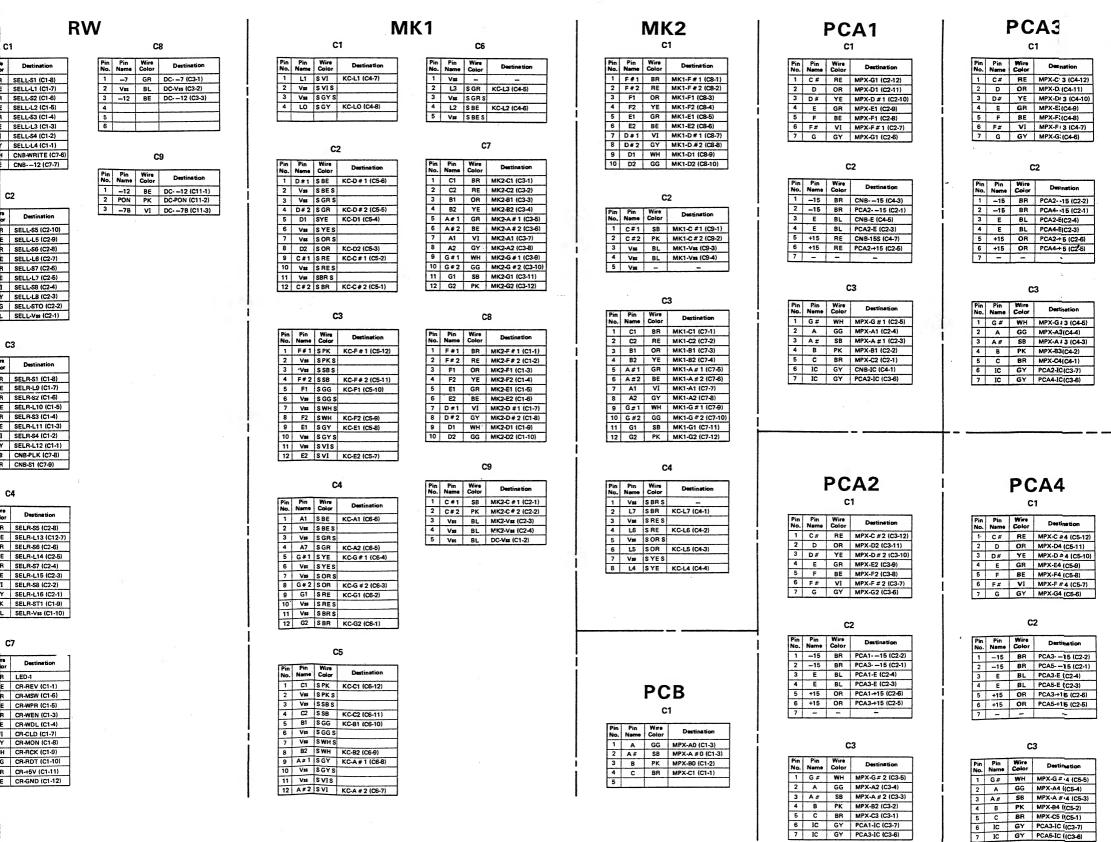
B PK MPX-B5 (C6-2)

C BR MPX-C6 (C6-1) 3 E BL CNX-E (C2-1)
4 LAMP YE CNX-LAMP (C2-2)
5 HPO1 BR CNX-HPO1 (C2-3)
6 HPO2 RE CNX-HPO2 (C2-4) 4 8 PK MPX-87 (C8-2)
5 C BR MPX-C8 (C8-1)
6 IC GY PCA6-IC (C3-7) CN Destination C10 IC GY PCA4-IC (C3-7)
IC GY PCA6-IC (C3-6) 1 Vss BL CNB-Vss (C6-3)
2 -12 BE CNB--12 (C6-1) Pin Pin Wire Destination C1 7 E BL CNX-E (C2-5) EQ 3 TRS RE KC-PS2 (C3-2)
4 ENS GR A-ENSS (C5-8) Pin Pin Wire No. Name Color De 1 -12 BE CN8--12 (C2-1) 2 -15 BR CN8--15 (C2-3) 5 TRM BE A-TRMSW (C6-6) C4





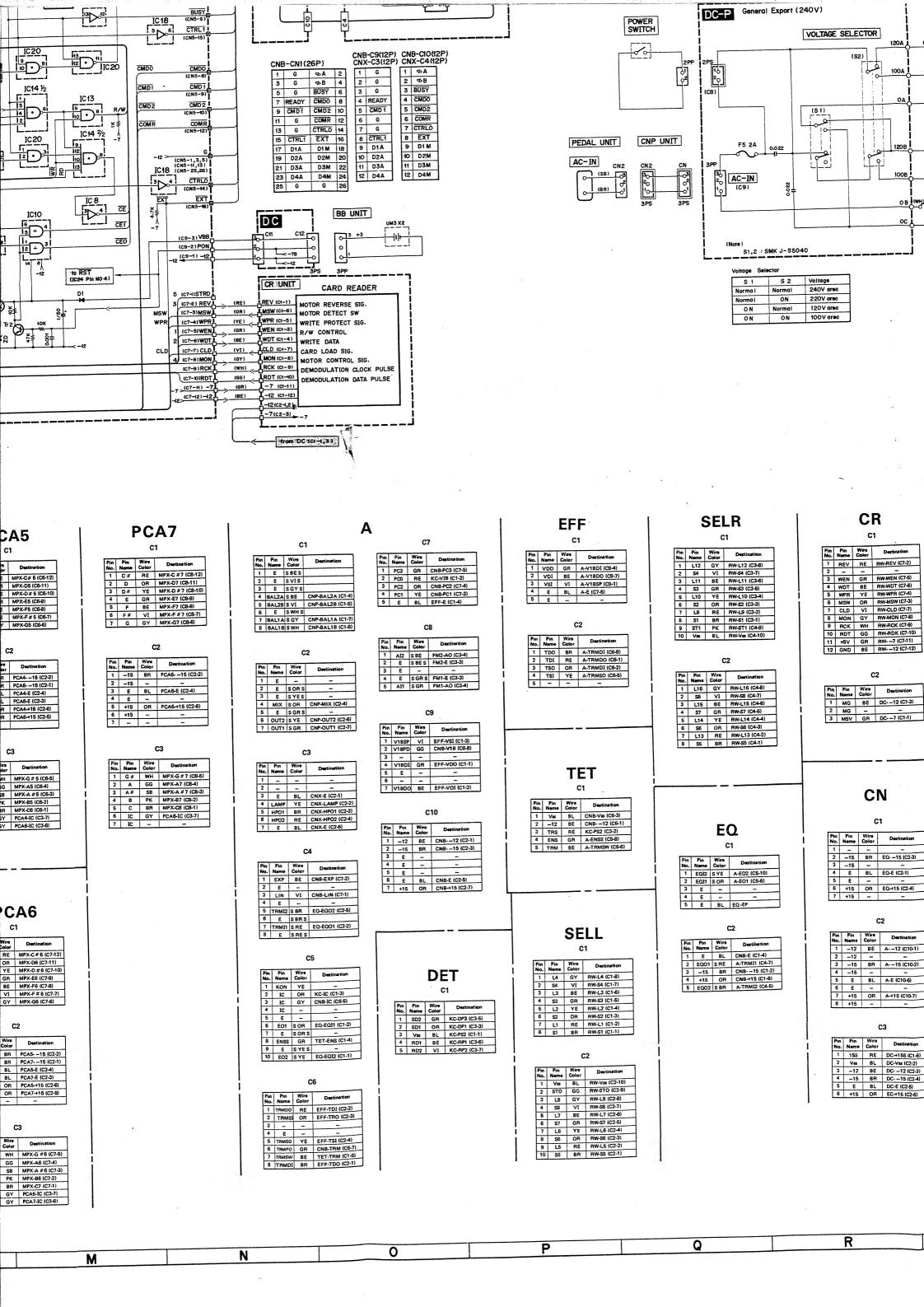


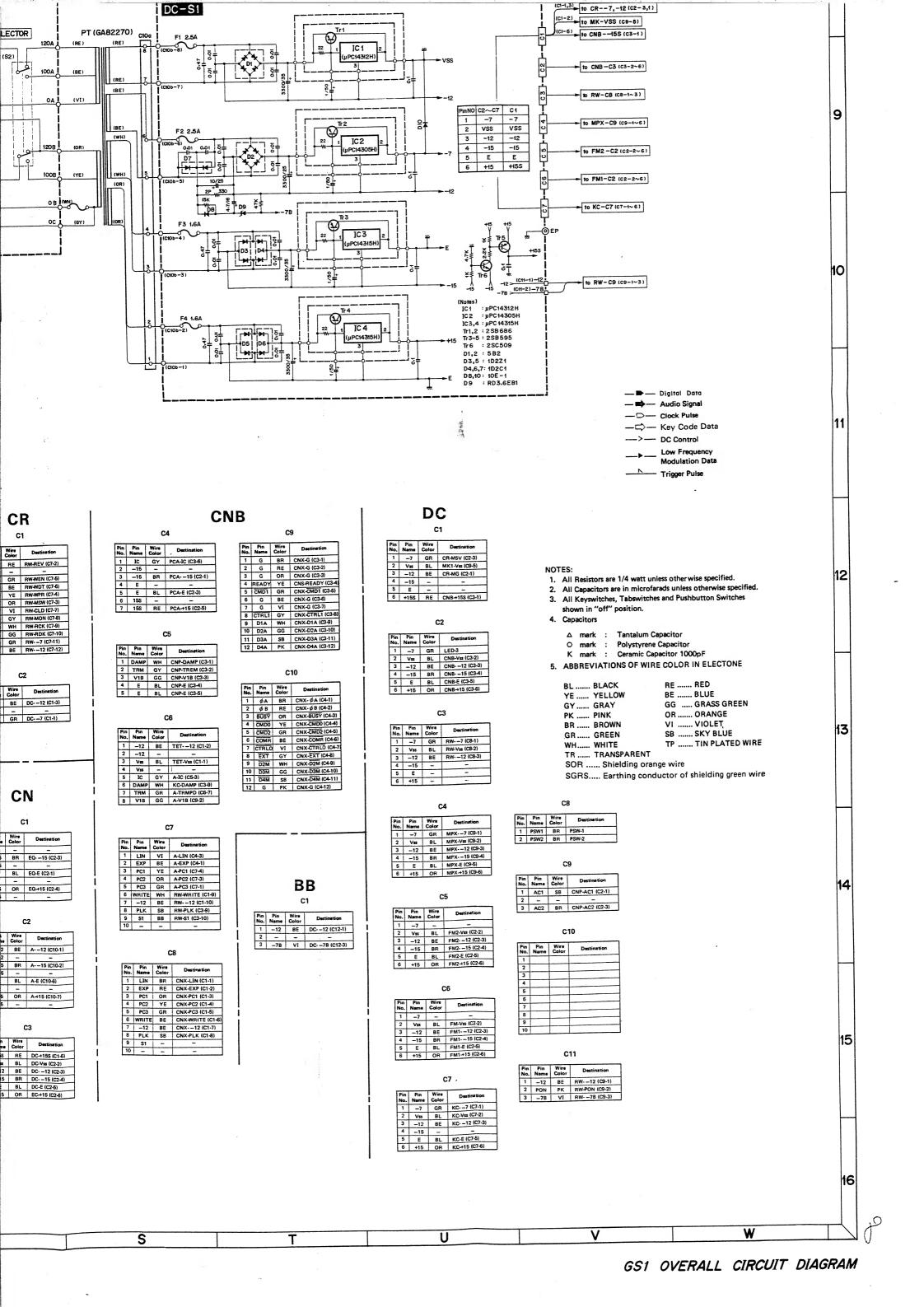


F

G

H





YAMAHA GS2 PARTS LIST

CONTENTS

A.	Electronic Components (電気部品)······	1
В.	Control Panel Assembly (コントロールパネル)・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	6
C.	Pedal Assembly (ペダルAss'y)・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	8
D.	D Rack & Power Supply Unit(Dラック及び電源ユニット)・・・・・・・・・・1	0
E.	Keyboard Assembly (鍵盤)····································	12
F	Cabinet (风生)1	14

A. Electronic Components (電気部品)

Ref. No.	Part No.		Description	部品名	Remarks	Common Model	Markets
	NA 80 69 20	Circuit Board	FM #8605	FMシート		GS1	
	NA 80 69 30	– do. –	KC #8606	кс シート		GS1	C.
	NA 80 69 60	– do. –	A #8609	A シ ー ト		GS1	
	NA 80 73 80	− do. −	MK3 #8639	M K 3 シート			
	NA 80 74 10	– do. –	MK4 #8610	M K 4 シート			
	NA 80 74 01	_ do	PN-EFF #8637	PN-EFF シート			
	NA 80 74 02	— do. —	PN-SEL-L #8637	PN-SEL-Lシート			
	NA 80 74 03	– do. –	PN-SEL-R #8637	PN-SEL-Rシート			
	NA 80 74 04	– do. –	PN-EQ #8637	PN-EQ シート			
	NA 80 74 05	– do. –	PN-STO #8637	PN-STOシート			
	NA 80 74 20	<u> </u>	· RW #8608	R W シート			
	NA 80 73 90	do	DC #8638	D C シ ー ト			J
	NA 80 74 60	– do. –	do #8638	n			U,C
	NA 80 74 70	– do. –	- do #8638	"			G
	NA 80 83 50	– do. –	AC #8626	A C シート			J
	NA 80 83 60	do	– do. – #8626	"			U,C
	NA 80 83 70	do	- do #8626	. 11			G
	i G 00 11 80	IC	TC4013BP	1 с	D Flip-Flop		
	i G 00 12 40	– do. –	TC4011BP	'n	2-input NAND		
	i G 00 12 50	do	TC4027BP	"	J-K Flip-Flop		
	i G 00 13 90	– do. –	NJM4558DV	"	OP. Amp		
	i G 00 16 00	— do. —	BA634	"	Divider		
	i G 00 16 90	— do. —	TC4016BP	"	Bilateral SW		
	i G 00 17 20	– do. –	TC4069UBP	"	Inverter		
	i G 00 17 70	do	TC4051BP	n	8ch Multiplexer		
	i G 00 18 40	— do.—	HD7400	n	2-input NANDx4		
	i G 02 60 00	do	#02600	n	VCA		
	i G 02 65 00		HD7416P	n n	Inverter		
	i G 02 68 10	– do. –	HD74LS20P	"	4-input NANDx2		
	i G 02 69 10	– do. –	HD74LS00P	"	2-input NANDx4		
	i G 02 70 00		HD7404P	"	Inverter		
	i G 02 70 10	— do. —	HD74LS04P	"	Inverter		
	i G 02 87 00	— do. —	μPC14315P	. "	+15V Regulator		
	i G 03 29 00		iG03290	11	BBD Driver		
	i G 03 32 00	do	μPC14312H	n n	+12V Regulator		
	i G 03 33 00		μPC14305H	"	+5V - do		
	i G 03 35 00		μPC610D	"	10 bit D/A Convertor		
	i G 03 55 00		TC4028BP	n n	Decoder		
	i G 03 81 00		TC4024BP	n n	Counter		
	i G 04 35 00		TC40161BP	"	Programmable 4 bit counter		
	i G 04 37 00		HD74LS08P	ı,	AND		
	i G 04 38 00		HD7417P	"	Buffer		
	i G 04 40 00		HD74LS74AP	"	D Flip-Flop		
	i G 04 42 00		HD74LS138P	"	Decoder/Demultiplexer		
	i G :04 :43:00		HD74145P	"	BCD to Decimal Decoder		
	i G 04 44 00		HD74LS161P	"	Synchronous 4 bit Counter		
	i G 04 45 00		HD74LS240P	n	Buffer x 8	1	
	i G 04 46 00		SN74LS245	"	Octal Bus Transceivers		
	i G 04 47 00		SN74LS273	n n	Octal D Flip-Flop		
	i G 04 48 00		SN75366N	n n	NAND(TTL to MOS)		
	i G :04 :49:00	- do	μPD8035	<i>"</i>	CPU	1	

[※] New Parts (新規部品) (J: Japan, U: US.American, C: Canadian, G: General)

Ref. No.	Part No.	Descript	ion	部品名	Remarks	Common Model	Markets
	i G 04 52 00	IC	TC5516P	I C	2KX8 bit RAM		
	i G 04 53 00	- do	TC4009UBP	"	Inverter		
-	i G 04 61 00	– do. –	MN3009	"	256 Stage BBD		
	i G 04 80 00	- do	HD74LS366	"	Bus Driver		
	i G 05 28 00	– do. –	TC40H032P	"	2-input OR x 4		
	iT 31 10 00	- do	YM311	n	кс		
	iT 31 20 00	- do	YM312	"	СР		
	iT 31 60 00	- do	YM316	"	ACC		
	iT 32 00 00	- do	YM320	"	IG		
	i T 32 10 00	- do	YM321	"	EG		
	i T 32 20 00		YM322	"	EC		
	i T 32 70 00		YM327	"	ADD		
	i T 34 40 00		YM344	"	PG		
	i T 34 50 10		YM34501	"	OPC		
	i T 34 50 20		YM34502	"	ОРМ		
	i T 34 70 00		YM347	n n	VRG		
	i T 63 30 00		YM633	"	SEC II		
	i N 00 33 00		MB8516	"	EP ROM iG04510		
	i A 05 09 10	Transistor	2SA509(Y)	トランジスタ			
	i A 07 43 00		2SA743A(B)	"			
	i A 10 15 70		2SA1015(O,Y)	"			
	i C 04 58 30	······································	2SC458(C)	"		-	-
	i C 04 58 80		2SC458(B,C)	"			
	i C 04 58 90		2SC458LG(C,D)	"		1	
	i C 04 59 00		2SC458(C,D)	"			
	i C 05 09 20		2SC509(Y)	"			
	i C 07 52 30	······································	·	"		-	
	i C 12 12 00		2SC752(O.Y) 2SC1212A(C)	"		-	
	i C 19 59 30		2SC1959 (O,Y)	"		-	
	10 19 59 50	- do	230 1939 (0,1)	,		++	
	i E 10 12 00	CET	2SK105F	F E T		- 33	
	12 10 12 00	1 1-1	231(1001			-	
	i F 00 00 10	Diodo	10104.6	ダイオード		-	
	i F 00 00 40		1N34A		· · · · · · · · · · · · · · · · · · ·	++	
			181555	"			
	i F 00 00 70		1S2473VE	" ツェナーダイオード			
		- do Zener	WZ-050			-	
		-dodo	RZ3.6EB1			-	
_	i H 00 01 10		5B-2	ダイオード		-	
	i H 00 02 80		1D2C1	" "			
	i H 00 02 90		1D2Z1	"		+	
	i H :00 :05 :90	- ao	10E-1	"			
	i K 00 02 00	Dhota Count	D072 12	- · · ·		+	
	1 1 00 02 90	Photo-Coupler	P873-13	フォトカプラー			
	E0 00 54 75	Ba-t-II - tiba t C	0.47 5/400:			1	
	FC:08:54:70	Metalized Myler Cap.	0.47μF/100V	MMコンデンサ		1	
				_ :-		1	
		Polystyrene Cap	180PF	スチコン	····		
	FD 15 22 70		270PF	"		1	
	FD 15 23 30	<u> </u>	330PF	"		1	<u> </u>
						-	
	FM 09 62 20	Bipolar Electrolytic Cap.	2.2μF/16V	バイポーラケミコン			
	FM 09 63 30	- do	3.3μF/16V	"			

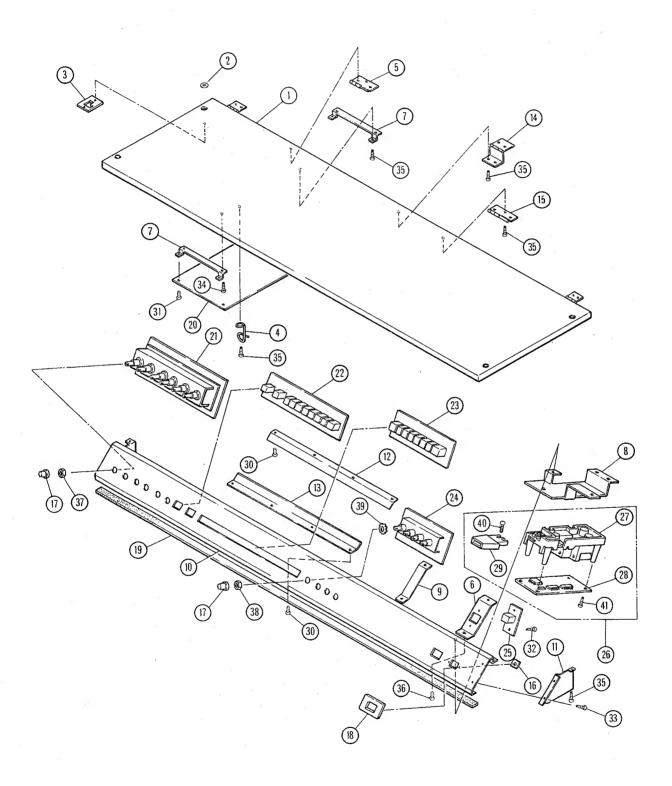
[※] New Parts (新規部品)

Ref. No.	Part No.	Descript	ion	部品名		Remarks	Common Model	Markets
	FM 09 64 70	Bipolar Electrolytic Cap.	4.7μF/16V	バイポーラケミ:	コン			
	FM 09 71 00	- do	10μF/16V	"				
	FM 09 72 20	– do. –	22μF/16V	"				
	FM 22 61 00	– do. –	1μF/25V	" "				
		-						
	FZ 00 22 50	Spark Suppressor Cap.	0.022μF	スパークキラ	-			
	FZ 00 23 90	Electrolytic Cap.	3300μF/25V	ケミコ	ン			
	FZ 00 24 00	– do. –	3300μF/35V	"				
	HL 31 54 70	Metal Oxide Film Resisto	r 470Ω 1W	酸金抵	抗		. %	
	 	Flame Proof Carbon Resis		不燃化カーボン排	医抗 .			
	HV 55 44 70		47Ω	"				
	HV 55 51 00	– do. –	100Ω	11			*	
			4710.0	- >- 11 40	c +1			
	 	Module Resistor	4.7ΚΩx8	モジュール 抵	5. 九			
	HZ 00 16 80		4.7ΚΩx12	"				
	HZ 00 16 90		10KΩx12	"				
	HZ 00 17 00		27ΚΩχ12	"				
	HZ 00 17 10		100KΩx10	"				
	HZ 00 17 20		470KΩx12		4±			
	 	Metal Film Resistor	1KΩ ±0.1%	金皮抵	抗			
	HZ 00 17 40	- do	2KΩ ±0.1%					•
	H\$ 31.05.50	Variable Resistor	Α10ΚΩ	可变抵抗	器 Vi	b. Depth, Tre. Depth		
	HS 31 11 60		Β5ΚΩ	11	Tu			
	HS 31 12 40		G50KΩ×2	"		eb. Mid. Bass		
	HS 31 12 50		Α50ΚΩx2	"	Vo			
	HS 31 13 30		C100KΩ	"		b. Speed		
	HS 31 14 00		C250KΩ	"		e. Speed		
	1.0.01							
	HT 19 00 50	Variable Resistor	Β10ΚΩ	半 固 定 抵	抗			···
	HT 19 00 60		Β20ΚΩ	" "				
	HT 19 00 70	- do	Β50ΚΩ	"				
_	HT 19 01 30	- do	Β2ΚΩ	"				
	LB 30 01 60	Cannon Socket	XLR3-32	キャノンソケッ	ット			
	LB 20 18 20	AC Inlet	2P	2Pインレッ	/ h			J.U.C
	LB 30 07 30	Base Pin	3P	2.5ピッチベース	ピン To	p Entry	1	
	LB 50 02 50	– do. –	5P	"		do. –		
	LB 60 24 60	– do. –	7P	"		do. —		
	LB 60 24 90	– do. –	8P	п		do. –		
	LB 60 24 70	- do	10P	n n		- do		
	LB 60 31 30	- do	12P	"	-	- do. –		
_	LB 50 02 70	- do	5P	"	Sic	de Entry		
	LB 60 37 00	– do. –	6P	"		- do		
	LB 50 03 70	- do	5P	"	Bo	ettom Entry		
	LB 60 30 60	– do. –	8P	"		– do. –		
	LB 60 30 70		10P	"		- do		
	LB 30 07 20		3P	2.5ピッチハウジ	ング			
	LB 50 02 40		5P	n				
	LB 60 36 80	- do	6P	"				
	LB 60 24 40	· · · · · · · · · · · · · · · · · · ·	7P					
	LB 60 24 80	— do. — .	8P	"				

Ref. No.	Part No.	Descrip	otion	部品名	Remarks	Common Model	Markets
	LB 60 24 50	Housing	10P	2.5ピッチハウジング			
	LB 60 29 20	– do. –	12P	, , , , , , , , , , , , , , , , , , , ,			
	LB 60 24 20	Header	20P	ヘッダー			
	LB 60 35 50	– do. –	26P	"			
	LB 60 24 30	– do. –	30P	"			
	LB 60 39 00	IC Socket	24P	ICソケット			
	LB 60 39 10	– do. –	40P	"			
	LB 20 15 30	Fuse Holder Pin		ヒューズホルダーピン			
	LB 20 05 70	do		n			
	LB 20 11 20	Jack	,	ジャック			
	LB 20 15 40	– do. –		. "			*
	LB 20 18 60	AC Inlet		ACインレット			G
	LB 40 08 20	Housing	4P(Plug)	ハウジング			
	LB 40 08 30		4P	"			
	LB 40 08 80			コネクター			
	 	Connector Cap	9P	9P キャップ			
	LB 60 16 70			ピンコンタクト		-	
	LB 60:37 50		8P(Plug)	ハウジング			
	LB 60 37 70		8P	"			
	LB 60 38 80		4P .	4P プラグ			
	LB 60:39:70		6P	コネクター			
	LB 60:39 90		8P	"			
	LB 60:40:20		6P	ハウジング			
	LB 60 40 40		8P				
	LB 00 40 40	- uo					1
	BB 00 44 30	Contact		0.5ピーチョンクカレビン			
	 			2.5ピッチコンタクトピン	FI-		-81
	BB 00 44 90			コンタクトピン メス	Female		
	BB 00 46 90			コンタクトピン オス	Male		
	BB 00:49:90	— do. —		"			
	KD 00 00 00	(NA:=i=+=)	T2.5A 250V	·			G
		Fuse (Miniature)		ミニチュアヒューズ			G
	 	- do do	T1.6A - do	. "			
	 	- do do	1.6A — do. —	"			J
		- do do	2.5A — do. —	"			J
		- do do	1.6A 125V	11			u,c
	KB 00 25 20	- do do	2.5A — do. —	,,,			U,C
	 	Card Reader Unit		カードリーダーユニット			
		Key Switch Unit I		スイッチユニットI	6		l
		– do. – Ⅱ		n II	4		
	NB 03 70 40	Tablet Switch		タブレットスイッチ	Pedal		
	NB 81 71 40	Power Supply Unit		電源ユニット			J
	NB 81 72 90	− do. −		"			υ,c
×	NB 81 73 00	— do. —	· · · · · · · · · · · · · · · · · · ·	n		· · · · · ·	G
	NB 81 74 10	Power Transformer Unit	t	電源トランスユニット			
	MG 00 10 30	AC Cord		電源コード			J
	MG 00 10 40			ıı ı			U
	MG 00 10 50			"			G
	MG 00 11 20			n n			С
	MZ 80 85 50	Flat Cable Assy	FM 30P	F M 線 材 キ ッ ト			-
	1100,00,00			1 14 WW 10 1 2 1			ļ

Ref. No.	Pa	rt l	Vo.		Description	on	部品名	. Remarks	Common Model	Markets
	ΜZ	80	93	20	Flat Cable Ass'y	- 26P	TD線材キット			
	KA	40	05	00	Slide Switch		スライドスイッチ	Line Out		
	KA	40	07	00	– do. –		"	PGM Lock		
					Voltage Selector		電圧切替器			
	KA	10	10	60	See-Saw Switch		電源スイッチ	Power	-	
				_	Rotary Switch	3-3	ロータリースイッチ	Detune		
					Push Switch	GY	プッシュスイッチ	Tremolo, Ensemble, Store	SK20	
	KA	90	17	10	- do	WH	"	Tone Sel.		
		_								
	GD	90	02	50	Line Transformer	0	ライントランス		 	
			;							
	-			-	Choke Coil	68μH	チョークコイル		_	
	<u> </u>			_	Coil	CK4	コイル			U,C
	GE	90	05	30	Coil	CK6	"			u,c
				_			*			
	αυ	00	10	00	Ceramic Vibrator	6.00MHz	セラミック発振子			
				_			45 49 -			
	1	;			Insulation Bushing		絶縁ブッシュ			
	i L	00	05	80	Mica Base		マイカベース			
		;	;					1		
	-				Card Reader Unit		カードリーダーユニット			
				_	Mech. Unit, Card Reader	K90-0799	メカユニット			
					Circuit Board, - do	K90-0711	C/R シ - ト		-	
	iΧ		:		·	TDA1041-RP12	I C	E60-0039	-	
	i X	00	01	20	- do	EHMD226W34	"	E60-0040		
	iΧ	00	01	30	do	M5923		E60-1092		
					- do	HD74LS05P	"	E60-1140	_	
					Transistor	2SA564(S)	トランジスタ	E65-6054	 	
	i X	00	01	40	– do. –	2SA683-R	"	E65-6089		
	-		_		Diode	1S1558	ダイオード	E65-5001		
					- do	10D1	n .	E65-5002		
, .	+			\rightarrow	Relay	RZ-5	リレー	E62-1105		
	НХ	00	00	10	Variable Resistor	Β1.5ΚΩ	半固定抵抗	E62-9540		
				\perp						
				\dashv						
				_						
									-	
						7			-	
	ļ			_	0					
				_					-	
	ļ				And Andrews					<u> </u>
				_						
										<u> </u>
									-	
								, , , , , , , , , , , , , , , , , , ,		
					The second section of the sect				4	ļ
									<u> </u>	1
								· · · · · · · · · · · · · · · · · · ·		1
			:						ı	1

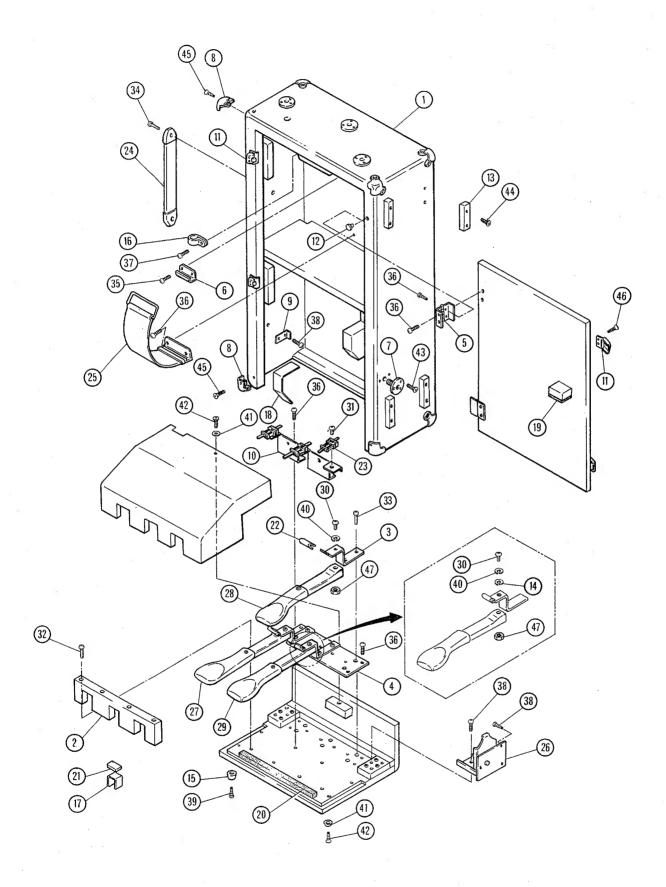
B. Control Panel Assembly (コントロールパネル)



	Ref. No.	Part No	э.	Description		-	部 品	名		Remarks	Common Model	Markets
*[1	DA 80 5	9 90	Top Board Ass'y			屋根	集 成				
	2	AA 02 9	0 40	Washer			皿ワッ	シ・ヤ				
	3	AA 81 4	6 00	Stay Holder		•	ステー受	け金具			GS1	
	4	AA 81 4	6 30	D Rack Hook			Dラック	フック		0	GS1	
*[5	AA 81 6	0 60	D Rack Hinge A			Dラック	蝶番A	Male			
*	6	AA 81 6	0 80	STO Angle			S T O 7	ングル				
*	7	AA 81 6	0 90	P.C.B. Angle			シートア	ングル				
*	8	AA 81 6	1 10	C/R Holder			CR取	付 金 具			*	
₩[9	AA 81 6	2 10	P.C.B. Angle			シート補強	アングル				
*	10	AA 81 6	6 40	Control Panel			コントロー	・ルパネル				
*Γ	11	AA 81 6	6 50	Control Panel Angle			パネル補強	アングル				
*	12	AA 81 6	6 70	SEL Angle A			SELア	ングルA				
*	13	AA 81 6	6 80	– do. – B		-	"	В				
*	14	AA 81 7	3 80	Hinge, Top Board			蝶	番			-	
*	15	AA 81 7	4 00	D Rack Hinge C			Dラック	蝶番C	Male	-	-	
*	16	AA 81 7	5 70	Nut			止めす	· ット				
	17	CB 81 0	1 20	Knob			ツ マ	, (~
*	18	CB 81 8	1 50	Card Reader Escutcheon			リーダーエフ	くカッション				
*	19	CC 01 5	1 20	Felt			フ ェ	ルト				
Γ	20	NA 80 6	9 60	Circuit Board · A	48	8609	A シ	- h			GS1	
*	21	NA 80 7	4 01	– do. – P	N-EFF #8	8639	PN-EF	Fシート				
*	22	NA 80 7	4 02	do P	N-SEL-L #8	8637	PN-SEL	-レシート				
*	23	NA 80 7	4 03	– do. – P	N-SEL-R #8	8637	PN-SEL	-Rシート				
*	24	NA 80 7	4 04	do P	N-EQ #8	8637	PN-E	Qシート				
*	25	NA 80 7	4 05	- do P	N-STO #8	8637	PN-ST	0シート				
T	26	NB 81 6	0.60	Card Reader Unit P	CR-303S		カードリー	ダユニット			GS1	
	27	NX 80 0	1 10	Mech. Unit, Card Reader K	90-0799		メカユ	ニット			GS1	
Ī	28	NX 80 0	1:20	Circuit Board C/R K	(90-0711		C/R シ	- h		,,	GS1	
Ī	29	NX: 80: 0	1 30	Guide, Card Reader K	03-0007		カードリー	ダ挿入口		-	GS1	
Ī	30	EB 33 0	0 60	Flat Head Screw M	13×6 BL		血小	ネ ジ				
Ī	31	ED 33 0	0:50	Bind Screw N	13 x 5 — 0	do. –	バイント	・小ネジ				
T	32	ED 33 0	060	do N	13 x·6 — 0	do. –	1	'				
1	33	EF 33 0	0.80	Oval Head Screw N	13 x 8 — c	do. –	丸皿/	・ ネ. ジ				
T	34	E i 33 0	0.60	Bind Tapping Screw 3	x6 –	do. –	バインドタッ	ピングネジ		-		
Ī		E i 33 5	-		.5 x 12 — 0	do. –	1/	,	.40.			
Ī	36	E i 33 5	1 60	do 3	.5 x 16 — c	do. –	11					V-1104 (L. 1104 (1
1	37	EZ 30 70	0:10	Hexagonal Nut N	17		特殊六角	ナット				
ı	38	EZ 30 9	0 10	- do N	19		1					
T	39	EV 41 0	0.70	Toothed Lock Washer A	.7S		歯付	座 金				
Ī		EX 00 0		Tap Tight Screw M2 x 5	XA4-720	00507	タップタ	イトネジ			<u> </u>	
1		EX 00 0		do M2.6 x	6 EO9-260	0002	- //	·				
ľ						. 1						
1			1	W-W								
t			#								1	
ł												*
ŀ												
t			++		×							
h			+									
H		 	\dashv						L			
H			+									
-			+			-						
L			$\dagger \dagger$			\rightarrow						
- 1						- 1						

[※] New Parts (新規部品)

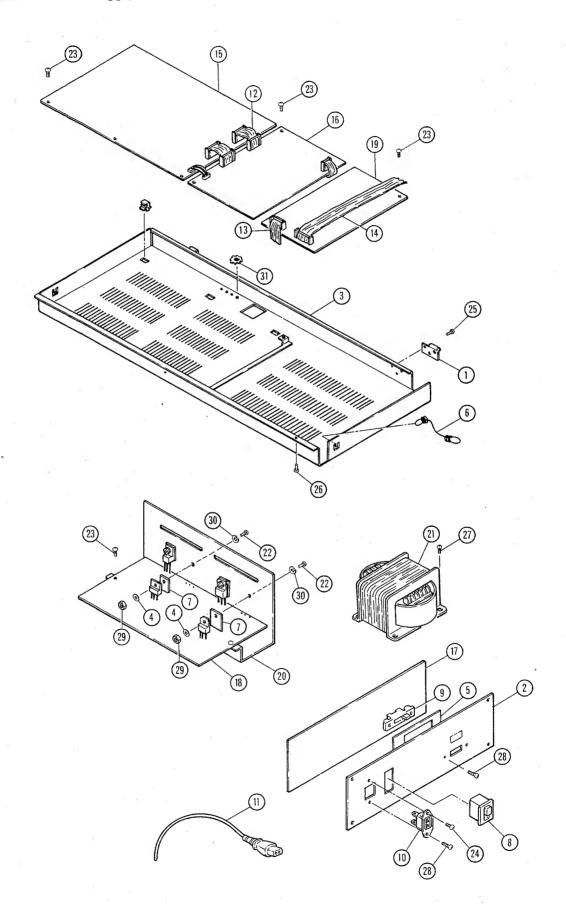
C. Pedal Assembly (ペダルAss'y)



Ref. No.	Part No.	Description		部	品名	ı	Remarks	Common Model	Markets
	NB 81 69 40	Pedal Unit		ペタ	'ル 組	立			
1	DA 80 60 50	Pedal Box Ass'y		ペダ	ル箱!	裏 成			
2	DA 80 65 30	Pedal Stopper Ass'y		ペダル	ストッパ-	-集成			t
3	AA 03 60 60	Pedal Spring	-	板	バ	ネ		-	
4	AA 03 62 00	Base	*	~	-	ス			
5	AA 04 37 50	Hinge, Pedal Box		蝶		番			
6	AA 80 43 20	EXP. Pedal Stopper	*	引 :	掛 金	具			
7	AA 80 42 70	Leg, Nut		脚用	ナッ	۲			
8	AA 80 90 50	Corner Metal		1 = -	ナーま	. 具			
9	AA 81 60 10	Rotary Stopper		ロータ	リーストッ	パー	,		
10	AA 81 60 40	Switch Angle		スイッ	ッチアン	グル	-		
11	AA 99 00 58	Lock		ダルマ	マパッチ	ン錠			
12	CB 00 20 50	Rubber Button	BL	ゴム	ボタ	ン			
13	CB 01 03 10	Case Leg			脚				
14	CB 02 82 50	Washer		滑	り座	金			
15	CB 81 81 10	Leg		ੜ	<u></u>	脚			
16	CB 81 81 20	Nylon Clamp		ナイロ	コンクラ	ンプ			
17	CC 02 19 20	Pedal Felt		ペダ	ルフェ	ルト			
18	CC 02 19 30	Rotaly Stopper Felt		回転」	Lめフェ	ルト			
19	CC 02 19 90	Felt		フ	ェル	ŀ .			
20	CD 06 01 70	Pedal Cloth (L)		ペダル	レクロス	(大)			
21	CD 06 01 80	- do (S)			"	(小)			
22	CE 06 50 20	Actuator		アク・	チェー	ター			
23	NB 03 70 40	Tablet Switch		タブレ	ットスイ	ッチ			
24	NB 80 59 50	Handle Ass'y		取	手 4	\ss'y			
25	NB 81 67 50	EXP. Pedal Stopper Band		EXPペ	ダル止めい	ンド			
26	NB 81 69 50	Rotary Plate Ass'y		ロータリ	ープレート	Ass'y			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
27	NB 81 71 60	Pedal Ass'y (L)		ペダ	ル Ass'y	(左)			- track
28	NB 81 71 70	— do. — (R)			"	(右)			****
29	NB 81 71 80	do (C)			11	(中)			
30	EA 05 01 20	Pan Head Screw M5 x 1	2	ナベ	小ネ	ジ			
31	ED 03 01 20	Bind Screw M3 x 1	2	バイ	ンド小:	ネジ			***************************************
32	ED 04 03 00	do M4 x 3	0		11				·
33	ED 35 01 00	- do M5 x 1	0		11				
34	EF 25 03 00	Oval Head Screw M5 x 3	0 Cr	丸皿	. 小 ネ	ジ			
	E i 33 01 20		BL	1	ドタッピング				
	E i 33 51 20	- do 3.5 x 1	2 – do. –		"				
37	E i 34 01 00	– do. – 4 x 10	– do. –		"				
38	E i 34 01 20	- do 4 x 12	– do. –		"				
39	E i 34 01 50	- do 4 x 15			11				
40	EK 00 31 10	Spring Lock Washer φ5		皿バ	ネ 座	金			
41	EK 00 22 40	Washer ϕ 4	BL	山型	ワッシ	₩	* * * * * * * * * * * * * * * * * * * *		
42	EM 34 03 00	Oval Head Tapping Screw 4 x 30	– do. –	 	ッピング				
43	EO 33 01 20	Flat Head Tapping Screw 3 x 12	– do. –	皿タッ	アピング	ネジ			
44	EO 33 52 00	- do 3.5 x 2	0 – do. –		"		_		
	ER 23 11 20			丸皿	木ネ	ジ			
	ER 23 51 30	- do 3.5 x 1	3 – do. –		"				
	EV 10 00 50			六 角		١			
				· · · · ·		-			
	 								

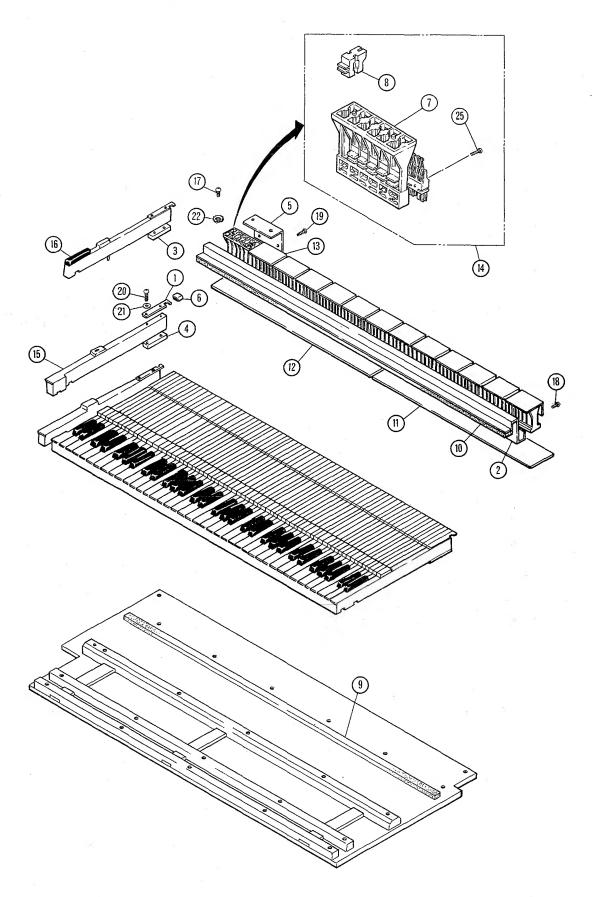
[※] New Parts (新規部品)

D. D Rack & Power Supply Unit (ロラック及び電源ユニット)



Re No		Part No.	Description	on			部品	品名		Remarks	Common Model	Markets
	1	AA 81 60 70	D Rack Hinge B			D =	· ック	対蝶番	В	Female		
	2	AA 81 61 70	Power Supply Panel			電	源	パネ	ル			J
		AA 81 61 80	do				,	7			*	G
		AA 81 74 50	– do. –				,	"				U,C
	3	AA 81 61 90	D Rack			D	ラ	ッ	ク			
	4	CB 07 28 80	Insulation Bushing			絶	縁ブ	ッシ				
	5	CB 81 78 90	Spacer			ス	ペ -	- サ	_	Voltage Sel.		
	6	CB 81 82 70	Rack Rope			ラ・	ック	п —	プ			
	7	i L 00 05 80	Mica Base			₹ .	イ カ	~ -	ス			
	8	KA 10 10 60	See-Saw Switch			電法	原ス	イッ	チ	Power		
	9	KA 40 08 30	Voltage Selector			電	压	刃 換	器			
1	10	LB 20 18 20	AC Inlet	2P		2 P	1 2	ノレッ	۲			J, U, C
		LB 20 18 60	- do	do			-	,				G
1	11	MG 00 10 30	AC Cord			電	源:		ド			J .
		MG 00 10 40	– do. –				,	''				U
		MG 00 10 50	- do				,	7		0		G
		MG 00 11 20	- do				,	,				С
1	12	MZ 80 85 50	Flat Cable Ass'y FM			FM	線杉	1 キッ	١		GS1	
-		MZ 80 85 80				T D)	"			GS1	
1	14	MZ 80 93 20	- do			線	材 =	キ ッ	ŀ			
1	15	NA 80 69 20	Circuit Board FM	#8605		F	M S	/ı —	٢		GS1	
1	16	NA 80 69 30	- do KC	#8606		K	С	"			GS1	
1	17	NA 80 83 50	- do AC	#8626		Α	С	11				J
		NA 80 83 60	- do do	do		11	7	, 11				U, C
		NA 80 83 70	do do	– do		"		"				G
1	18	NA 80 73 90	do DC	#8638		D	С	"				J
	\neg	NA 80 74 60	- do do	– do. –		"		"				υ,c
		NA 80 74 70	- do do	– do. –		11		"				G
1	19	NA 80 74 20	do RW	#8608		R	W	"				
2	20	NB 81 71 40	Power Supply Unit			電	原ユ	= "	ŀ	· · · · · · · · · · · · · · · · · · ·		J
		NB 81 72 90	- do	*			- ,	"	7			u, c
Г	7	NB 81 73 00	– do. –				,	,				G
2	21	NB 81 74 10	Power Transformer Ass'y	*		電源	トラ	ンスA	ss'y			
2	22	EA 02 60 80	Pan Head Screw	M2.6 x 8 Y	'e		ベ /		ジ			
2	23	ED 03 00 60	Bind Screw	M3 x 6 -	do. –	バイ	ィン	ド小オ	・ジ			
-		ED 33 01 20	- do	M3 x 12 B				,				U, C
2		ED 34 00 60	- do		do		1	,				
2		ED 34 01 00		M4 x 10			,	,				
		ED 34 01 40		M4 x 14 —				,				
_		E i 33 01 00			do. –	バイ	ンドタ・	ッピング	ネジ			
-			Hexagonal Nut	M2.6 Y				٠ - س	+			
			Spring Lock Washer		do. –	バ	ネ	座	金			
_	-		Toothed Lock Washer		L	歯	付	座	金			***************************************
-	_											
T	\dashv											
	1			. *								
1	\dashv											
<u></u>	\dashv									,		
-	\dashv											
\vdash	-+	+ + + +										
-	\dashv						***********					
1	\dashv											
	- 1											

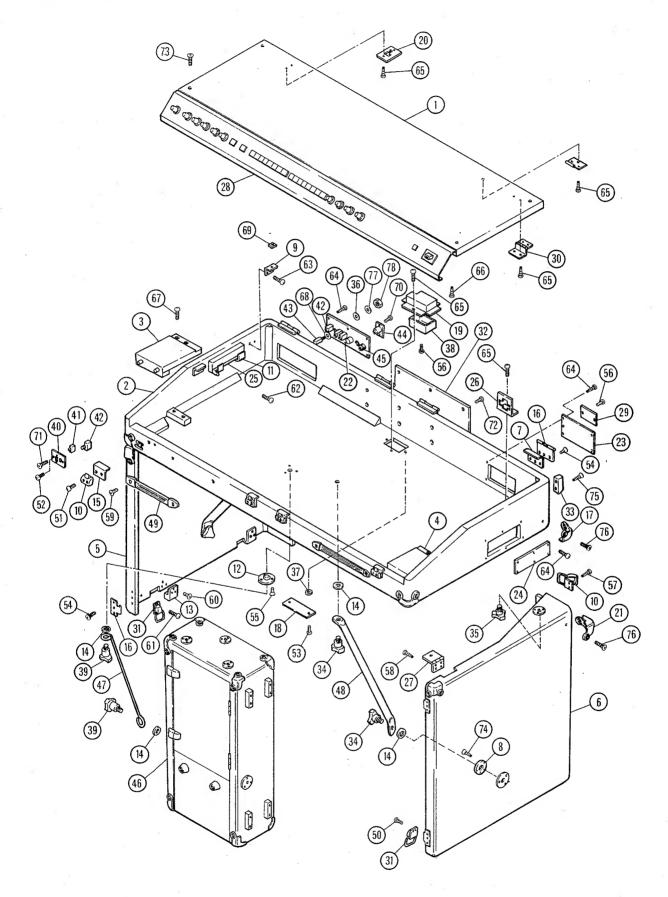
E. Keyboard Assembly (鍵盤)



Ref. No.	Pa	art N	о.	Descripti	ion		部 品 名	Remarks	Common Model	Markets
1	AA	81 4	9 80	Actuator Plate			アクチェーター駆動板		GS1	
2	AA	81 6	2 00	Switch Rail			スイッチレール			
3	BF	00 0	0 10	Key Weight		* 1	キーウェート	Black Key	GS1	
4	BF	00 0	0 20	– do. –			"	White Key	GS1	
5	СВ	81 7	3 00	Contact Cover			接点カバー		GS1	· · · · · · · · · · · · · · · · · · ·
6	СB	81 7	3 60	Actuator Plate Cap			駆動板キャップ		GS1	
7	СВ	81 7	3 70	Actuator Guide			アクチェーターガイド		GS1	
8	СВ	81 7	3 80	Actuator			アクチェーター		G\$1	
9	CC	01 5	2 10	Stopper Felt			フェルト	Key Board Rail		
10	CD	07 0	2 40	do II	*		ストッパーフェルトII	Key Board Stopper		
				Circuit Board	мкз	#8639	M K 3 シート			
12	NA	80 7	4 10	– do. –	MK4	#8610	M K 4 シート			, 1. · · · ·
13	NB	81 6	1 50	Key Switch Unit I			スイッチユニットI	6	GS1	
14	NB	81 6	1 60	– do. – II			n II	4	GS1	
15	+			White Key Ass'y	C		白 鍵 Ass'y			
	NX	80 0	2 60	– do. –	D		11			
		80 0			Е		n			
	NX	80 0	2 80	– do. –	F	0	n			
	NX	8Q (2 90	– do. –	G		"			
	NX	80 (3 00	– do. –	Α	<u>.</u>	11			
	NX	80 0	3 10	do	В		"			
	NX	80 0	3 20	– do. –	Ε'		"	1E		
16	NX	80 0	3 30	Black Key Ass'y	-		黒 鍵 Ass'y			
17	EA	04 (1 00	Pan Head Screw	M4 x 10	Ye	ナベ小ネジ			
18	ED	03 0	2 50	Bind Screw	M3 x 25	– do. –	バインド小ネジ			WAS ARRESTED
19	Εi	03 0	1 60	Bind Tapping Screw	3 x 16	– do. –	バインドタッピングネジ			
20	Εi	04 (3 50	– do. –	4 x 35	do	, "			
21	EV	30 0	0 40	Spring Lock Washer	φ4	– do. –	バオ座金			
22	EV	41 (0 40	Toothed Lock Washer	A4S	– do. –	歯 付 座 金			
					11.5.41.555.15115					
								Ť.		
	<u> </u>									, , ,
							-			
					-					

							-			
							0			
							·			
			+							
	1									
	. 1	+ +	+							
		1 1	;						, ,	
			+			-				

F. Cabinet (外装)



F	D. (
	Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets
*	1	DA 80 59 90	Top Board Ass'y	屋根集成			
*	2	DA 80 60 00	Bottom Case Ass'y	底 枠 集 成			
*	3	DA 80 60 10	End Block Ass'y (L)	拍子木集成(左)			·
*	4	DA 80 60 20	– do. – (R)	// (右)			
*	5	DA 80 60 30	Cover Leg Ass'y (L)	蓋 脚 集 成 (左)			
*	6	DA 80 60 40	– do. – (R)	// (右)			
	7	AA 01 46 90	Corner Angle	コーナーアングル			
	8	AA 01 58 70	Stay Washer	脚 受 座 金			
	9	AA 04 60 80	Top Board Holder	受 け 金 具			
	10	AA 80 24 50	Lock	パッチン 錠		i	
	11	AA 80 25 40	Stay Stopper	ステー押え金具			
[12	AA 80 42 70	Nut, Leg	脚用ナット			
	13	AA 80 42 90	Slip Fitting	滑 り 座	*		
	14	AA 80 46 30	Knob Bolt Ring	脚柱リング			
[15	AA 80 58 10	Corner Angle	コーナーアングル			*
	16	AA 80 64 20	Latch Hinge	引掛蝶番			
		AA 80 90 50		コーナー金具			1
	18	AA 81 12 60	Cover	蓋		GS1	J
		AA 81 26 00	- do	11		GS1	U, C, G
	19	AA 81 14 00	Battery Cover	バッテリーカバー		GS1	
		AA 81 46 00		ステー受け金具		GS1	
		AA 81 47 70		コーナー金具		Ο.	
*	22	AA 81 61 40	I/O Panel	1/0 パ ネ ル	4		
*	23	AA 81 61 50	PGM Panel	PGMパネル			
*	24	 	Power Supply Panel	電源パネル			J
*		AA 81 61 80	– do. –	"			G
*		AA 81 74 50	do				u,c
*			Top Board Stay	屋根ステー			
*			Connector Holder	コネクターホルダー			
*		AA 81 66 30		脚 蝶 番			
*		AA 81 66 40		コントロールパネル			
*			Connector Cover	コネクターカバー			
*			minge, Top Board	蝶番			
- 1		AA 99 00 00		パッチン錠		CP-70B	
		BA 50 00 60		ネームプレート		CP-70B CP-80	
		CB :01:03:10		脚			111
		CB 80 83 30		ノ ブ ネ ジ			
		CB 80 83 40	- do M8 x 30	// // // // // // // // // // // // //			
		CB 81 00 90 CB 81 29 20		絶縁ナット			
		CB 81 29 20 CB 81 42 40		グリップ型止め輪 電 池 ケ ー ス	2	GS1	
*		CB 81 81 30		し ガース ノ ブーネージ		001	
** **		CB 81 81 30 CB 81 81 40		<u>ノ ノ ネ シ</u> ホーンパネル			
**		KA 40 05 00	The state of the s	スライドスイッチ	Line Out		
				ジャック			
	43	LB 20 11 20 LB 20 15 40		"	Phones, Foot Cont.		
	44	- : : : - 	Cannon Socket XLR3-32	キャノンソケット	- coput		
*		LB 40 08 80		4 Pコネクター	Pedal		
*		NB 81 69 40		ペダル組立	. 300		
*			Pedal Stay Ass'y (L)	ペダルステーAss'y(左)			
*		NB 81 69 80	- do (R)	// (右)			
*		NB 81 69 90		脚 柱 Ass'y			
*		NB 81 75 10		取 手 Ass'y			
		w Parts (新規部品		,		L	

Ref.				Ť						<u> </u>				Common	
No.		art i			Description			T			名		Remarks	Model	Markets
	·		$-\cdot$		Pan Head Screw	M3 x 14		ナ	~		ネ	ジ			
	EA			-	– do. –	M3 × 20	– do. –			"					
	EΑ				– do. –	$M2.6 \times 6$	BL	L		11					
53	EΑ	33	02	00	. – do. –	M3 x 20	– do. –			"					
54	EΒ	23	01	40	Flat Head Screw	M3 x 14	Cr	m.	小	*	.	ジ			
55	ЕВ	33	01	60	- do	M3 × 16	BL			"					
56	ED	33	00	60	Bind Screw	M3 x 6	- do	1	イン	ドカ	ヽネ	ジ			
57	ED	33	01	40	– do. –	M3 x 14	do			11					
58	ĖD	34	02	00	- do	M4 x 20				"					
				_	Oval Head Screw		Cr	丸	Ш	小	ネ	ジ			
60	EF	33	01	60	- do	M3 x 16	BL			"					
			\rightarrow		Bind Tapping Screw	3 x 14	Cr	バイ	ンドタ	ッピ	ングオ	 トジ			
	Εi			-	- do	3 x 8	BL			"					
	Εi				do	3 x 12	- do	 		"					
	Εi				- do	3.5 x 10				<u>"</u>					
	Εi				do	3.5 x 10				"					
								 						1	
	Εi	-+	\dashv		do	3.5 x 16				<i>"</i>					
	Εi		+	\rightarrow	_ do	4 × 20	- do	<u> </u>		<u>"</u>					
					Fiber Washer				イバ						
	EK			_	Speed Nut				スピ						
				_	Oval Head Tapping Screw		Cr	丸皿	1タッ		グネ	ジ			-
	ЕМ	\rightarrow	+		– do. –	3 x 12	BL			"					
72	EM	33	51	20	- do	3.5 x 12	<u> – do. – </u>			"				-	
73	EM	35	03	00	– do. –	5 x 30	– do. –			"					·
74	ΕO	33	01	20	Flat Head Tapping Screw	3 x 12	– do. –	ш.	タッヒ	:ン:	グネ	ジ	*		
75	ΕO	33	52	00	– do. –	3.5×20	– do. –			"					
76	ER	23	11	20	Oval Head Wood Screw	3.1 x 12	Cr	丸	Ш	木	ネ	ジ		•	
77	LX	20	00	10	Flat Washer	φ9		特	殊	平	座	金	:		
78	LX	20	00	20	Hexagonal Nut	M9		特多	殊六	角ナ	· 'y	ŀ			
							*								
			1	\dashv											
	-														
				-											
		-	-	\dashv				· ·							
			-	\dashv										-	
	\vdash			\dashv											
				\dashv											
	\vdash		_	\dashv					-						
		_						<u> </u>							· · · · · · · · · · · · · · · · · · ·
				_				<u> </u>							
	<u> </u>			_											
				_											
									-						
					*										<u> </u>
				T										_	
			-									-			
		- :	-												
				1			-								
,	H	÷		\dashv											
	-	- ;	-	\dashv				<u> </u>							
		— ∔		\dashv						·					
	 			\dashv											
	H			+									0		
10:5:	نيا	i						<u> </u>							
፠ Ne	w Pa	arts (新規	見部と	品)			<u> </u>					-	101	